

**Cincinnati Christian University**  
**NSCI 220 99 Biology (Online)**  
**Fall 2019, 3 semester credit hours**

Instructor: Dr. Julie Bedi	Office Location: PH 267
Email: julie.bedi@ccuniversity.edu	Office Hours: By Appointment

### **Foster School of Biblical Studies, Arts & Sciences**

Cincinnati Christian University exists to educate men and women to live by Biblical principles and transformed lives, empowering them with character, skills, insight, and vision to advance the kingdom and impact society for Christ. CCU is committed to providing a Christ-centered, liberal arts education taught with a Christian worldview in students' chosen fields of study.

### **Course Description**

An introductory study in the basics of biology, focusing on human organ systems. Through a variety of experiences, students will learn general life processes and how these apply to the world in which we live.

### **Required Text**

*Human Biology 15<sup>th</sup> Edition*. Sylvia S. Mader and Michael Windelspecht. McGraw Hill, 2018. ISBN-10: 1259689794. (Note: You are welcome to have a newer version, but this is the version I have and will be using for the course. Page numbers I cite during the course will come from the 15<sup>th</sup> edition.)

### **Learning Objectives**

At the end of this course, the student will be able to:

- Understand the definitions of life and of science
- Understand the basic chemistry of the life
- Understand cell structure and function
- Understand the organization of the human body, the function of each organ system, and how diseases affect function
- Understand heredity and genetic inheritance
- Understand contrasting views on origins, creationism, intelligent design, and evolution
- Read, comprehend, evaluate, and reflect on current scientific literature and ideas in light of academic insights, personal experiences, scientific evidence, societal values, and a Christian worldview

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## **Arts & Sciences Departmental Outcomes**

CCU's Arts & Sciences program is designed to prepare students to...

1. communicate effectively in both oral and written forms in a variety of rhetorical contexts, including Standard English,
2. adeptly utilize modern research and writing tools,
3. identify decisive events and ideas in the human experience and assess their influences on modern culture and thought,
4. employ critical and creative thinking and mathematic and scientific principles for problem solving, literary and socio-cultural analysis, intercultural understanding, and research in the sciences and humanities,
5. demonstrate the integration of academic insights and experiences by constructing and employing a personal framework in which ethical decisions can be made in light of societal values and a Christian worldview.

## **Grading Policy**

Letter grades will be assigned based on the published grade point system in the CCU Academic Catalog. Grades will be comprised of the following:

Final Capstone Paper	20%
Module Notes	20%
Quizzes	20%
Module Assignments	40%

## **Quizzes**

Quizzes assess whether the course objectives are being met. **If a student misses a scheduled quiz without making prior arrangements with the instructor, it cannot be made up.** It is the responsibility of the student to take the quiz during the scheduled window or to make arrangements otherwise at least two days in advance if there is a valid, documented reason the student is unavailable during the entire durations of the scheduled quiz window. Please ensure that you exercise academic integrity. The quiz responses should be your own.

## **Assignments**

Graded and ungraded assignments will be given throughout the course to help students understand and apply major course concepts. Assignments will be posted on Canvas at least one week before their due date. The final capstone paper will be due at the end of the semester and will be introduced during Module #4. This will take the place of a final exam.

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### **Late Assignments**

An assignment will be considered late if it is not submitted by the date/time on which it is due. In general, late assignments will receive a 0. Assignments that are late due to severe illness or an emergency situation may be accepted only if a student has appropriate documentation. If you are traveling for a school-related activity or any other reason, you should plan to submit your assignments in advance of the trip. Late assignments due to travel, school activities, or any other planned/scheduled event will not be accepted unless a student has made mutually agreed upon arrangements with Dr. Bedi at least two days in advance of the deadline.

### **Academic Integrity**

Any work submitted must be your own. This class will follow CCU's regulations pertaining to academic integrity. A copy may be found in CCU's Student Handbook and Course Catalog.

### **Disability Services**

***Students who require academic accommodations due to a documented physical, psychological, or learning disability may request assistance from the Student Services Department. Students are encouraged to complete this process within the first two weeks of the semester. The Student Services Department is located on the upper level of Presidents Hall. You may also contact the office by phone at 244-8150.***

### **Attendance**

You are expected to be active on Canvas and submit assignments weekly during the course. Attendance will be taken every week based on assignment submission. Students who submit at least one assignment for the week will be counted "present." Students who do not submit any assignments for the week will be counted "absent." Two absences are allowed in the course. (Note that while two absences are allowed, students will still receive 0's for any work that is not submitted by the due date.) After exceeding two absences, students will be dropped from the course and will receive a grade of FA (failure due to absence). Students are required to keep records of each absence. Students applying for reinstatement after being dropped from the course must submit documentation about each absence to the Registrar's Office. Whether a student can be reinstated in a course is decided by a university-level attendance committee, not by the course instructor.

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**Dear Student,**

Since we may not have the privilege of meeting in person this semester depending on your location, I wanted to provide some additional detail about the course that I hope you will find helpful. I will e-mail you during the first week of the semester, however, to schedule one-on-one and/or small group meetings with as many of you as are available to come in and meet briefly with me in my office so that I can make sure you are set up technology-wise and understand where to find the course materials.

The *Human Biology (15<sup>th</sup> Edition)* textbook will be used as the base outline for the course topics, so it is very important that you obtain the textbook as soon as possible so that you do not fall behind in the course.

The course will be organized by modules and weeks (see outline below). As we progress through the semester, you will be able to access all the details and materials for each module on Canvas. I will post specific instructions regarding assignments one week at a time. **To find the current week's instructions and assignments, login to Canvas > click on the Biology course > and click "Home." A screen will appear with each week's work in order from the first week of class (top) to the most current week (bottom).**

Since this is an online course, keeping up with and fully understanding the videos, chapter readings, and corresponding notes will be crucial to your success in this course. There will be quizzes, projects, activities, article/writing assignments, discussions, etc. as you would find in an in-person type course, but in an online course, you must take more of the responsibility for keeping up the pace of your learning with course deadlines. If you need help setting personal deadlines or pacing yourself through the work, please e-mail me. I will be happy to help you set some personal time management goals to help make the workflow more efficient if scheduling seems daunting for you. You should plan to check Canvas at least weekly for new assignments and deadlines.

Please plan ahead each week, and use your time wisely. I would recommend setting aside one focused hour per weekday to spend on biology or at least two larger time blocks (~2.5 hours each). I really do want you to enjoy this course and learn as much as you can from it but speculate that you may be miserable if you wait until the last minute each week and try to do all of the week's work in one day. You should plan to spend around five hours per week on biology work. If you find that the work is taking significantly more than five hours each week, please let me know. I want you to learn but also want to make sure that the amount of work required is reasonable and beneficial. I am always open to hearing from you if you feel otherwise!

I hope that you are excited about this opportunity to study the bodies God created for us to live in while here on earth and learn how to better care for them! The biggest take-away I have had from my work in healthcare research has been that life and health are precious gifts from our Heavenly Father and looking further into the design of the human body can be one of the most worshipful practices a person can undertake...Our God is genius! I look forward to a wonderful semester of study together!

If I can be of help to you, please e-mail me anytime or schedule an appointment to come visit me on campus. Happy learning as we behold the creativity, wonder, intelligence, and beauty of God!

Sincerely in Christ,



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**Fall 2019 Course Outline\* & Weekly Instructions**

*These directions are an overview only. More details will be posted weekly with each assignment.*

**Course Introduction, Week of August 19**

The purpose of this course introduction section is to better orient you to this online biology course. Please take time (I'm estimating 45 minutes) to do the following three tasks BEFORE beginning Module 1.

- View the "Introduction to Online Human Biology Course" PowerPoint or video (~10 minutes). (Choose the PPT file if you'd rather read and the video file if you'd rather listen.) In these presentations, I introduce myself briefly and hit the highlights of the syllabus to help draw your attention to some important sections.
- Read the syllabus in detail for yourself. It is important to orient yourself with the general objectives and expectations of the course. The syllabus serves as a "contract" between the student and the professor. If you don't understand any of the course policies (especially related to assignments and attendance), please ask questions to gain clarity early on.
- After completing the two tasks described above, complete Assignment 1: Course Intro on Canvas by Monday, August 26 to verify you have read the syllabus and understand the course expectations as outlined in the syllabus, ask any questions you may have, and to help me learn more about you so that I can better serve you this semester.
- Make sure that you have bought or rented a textbook that will arrive in plenty of time for you to complete and submit Module 1 Week 1's work by Tuesday, September 3.
- Meet with Dr. Bedi if your location allows to ensure you understand the course requirements and know how to use the Canvas platform and find the course materials

**Module 1 Week 1: Human Organization (Part 1), Week of August 26**

- **TASK 1:** Read module overview from Dr. Bedi
- **TASK 2:** Download the Module 1 Week 1 Video & Guided Reading Notes packet  
*Keep this packet handy throughout the rest of the Module 1 steps. It contains some graphics that will help you as you watch the videos, and it contains lots of questions and fill-in-the-blanks for you to answer or complete as you read through the pages in the textbook. I wrote this guide with the idea of it being as if I were talking to you or tutoring you as you watch the videos and read the pages to make sure you are catching the most important ideas. Each week, you have the option to A) Print the packet, fill it out by hand, and scan it. (Office Lens or iScanner apps work well or scanners are available on campus.) OR B) Save the packet electronically and type in your answers...whichever you prefer. Either way, please ensure that it is YOUR OWN work! Do not cheat yourself or others out of the opportunity to learn. Academic integrity policies will be enforced if any type of cheating is suspected.*
- **TASK 3:** Watch biological levels explanation video
- **TASK 4:** Watch biomolecules summary video
- **TASK 5:** Read pages 19 – 62 in your Human Biology textbook ("Chemistry of Life" & "Cell Structure and Function") and complete the guided reading notes (that you downloaded in Task 2). Submit your notes on Canvas by Tuesday, September 3
- **TASK 6:** Complete and submit Assignment 2 on Canvas by Tuesday, September 3. First, choose one of the hot topics related to this week's reading. Then read the associated article and answer the reflection questions yourself. Finally, comment on at least two classmates' posts.

**Module 1 Week 2: Human Organization (Part 2), Week of September 2**

- **TASK 1:** Download this week's guided reading notes. Read pages 67 – 90 in your textbook ("Organization and Regulation of Body Systems") and complete the guided notes. Upload the reading guide with your answers to Canvas by Monday, September 9. (As always for your notes, you are welcome to type your answers and upload the document or to write your answers, scan the document, and upload it. There are two apps that I know work well for scanning documents with your phone if you prefer writing by hand – Office Lens and iScanner.)

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- **TASK 2:** Review Week 1 material. Some study suggestions include reading back through the notes you took on your Week 1 reading and viewing the videos again that were posted in Week 1. Additionally, I have posted a PDF of a PowerPoint file that highlights the key concepts in the Week 1 material. I suggest that you review this file and note any questions you have. Once you have noted your questions, go back to your notes and the textbook to try to resolve anything that is still unclear. If you still have unresolved questions, please feel free to e-mail me. I would be happy to help you as you study and review. There is no official assignment here that will be submitted but just study. :)
- **TASK 3:** Create a game or quiz to review the Week 2 material. Your game or quiz must contain at least ten questions from the content on pages 67-90 of the textbook. The questions must be original. (Do not copy questions that the textbook already provides. This will receive no credit.) You may use any site or source you wish to make the game or quiz. (Some free examples include Quizlet, Kahoot, etc.) Post a link or document containing your game or quiz on the Discussion Board in Canvas by Monday, September 9 to receive credit for this assignment. You are welcome to complete other students' quizzes/games to help you review for the quiz.
- **TASK 4:** Take Quiz 1: Module 1 Weeks 1 & 2. Quizzes count 20% of your final grade. The quiz will be available on Canvas on Monday, September 9 from 8:00 a.m. – 9:30 p.m. You will log in to Canvas and take the quiz online. The quiz will contain 25 questions, and you will have 30 minutes to complete it. The quiz is open note, open book, but you must know the material reasonably well in order to complete the quiz accurately within the time limit.

*Please understand that you may not give help to any person who is taking the quiz nor receive help from any person while taking the quiz. If you give or receive help to/from another person on this quiz, it will be considered academic dishonesty, and CCU academic integrity protocol will be implemented. You are certainly welcome and encouraged to study together, but the quiz itself should assess your own knowledge and understanding of the content. Thank you for understanding. If you have questions regarding this issue, please e-mail me. I'd be happy to clarify any questions you may have.*

*If you know that you are not available for any 30-minute block between 8:00 a.m. – 9:30 p.m. on Monday, September 9 for valid, documented reasons, please contact Dr. Bedi via e-mail ([julie.bedi@ccuniversity.edu](mailto:julie.bedi@ccuniversity.edu)) at least two days in advance to schedule an alternate date and time. If you do not take the quiz during the scheduled window on September 9, you will receive a 0 for the assignment unless you have scheduled an alternate quiz date at least two days in advance due to a documented scheduling conflict or have a documented emergent situation arising preventing you from being available during the entire duration of the scheduled quiz window. These policies will apply to all course quizzes.*

**Module 2 Week 1: The Cardiovascular System, Week of September 9**

- **TASK 1:** Watch the overview video (“Cardiovascular System in Under 10 Minutes”) to get a good basis for beginning your study. There are no notes for this...Just watch with an attentive, engaged mind.
- **TASK 2:** Download this week's reading guide. Read pages 91 -129 (“Heart and Blood Vessels” and “Blood”), and complete the guided notes. Once you complete the notes, please upload them on Canvas for your weekly notes grade by Monday, September 16. Note that there are a few videos embedded in the reading guide to help you better understand how blood flows through the heart that would be helpful to watch in addition to the reading.
- **TASK 3:** Biblical Worldview Discussion Board: Much of what we are learning calls a person to think more deeply about God's creative genius. In Module 1, I thought about how God designed our bodies to need nutrients but how creatively He made the world so that we could get those nutrients in such delicious ways that just abound with variety. As you read through the intricate design of the cardiovascular system this week, I think you will find it quite amazing as well. Studying these topics always makes me think, "Wow, what a master Designer!" I would like to hear your thoughts on

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studying biology from a Biblical worldview. This assignment is due on Canvas by Monday, September 16.

- 1) What is a Christian/Biblical worldview in general?
  - 2) How is studying biology different when one approaches the subject from a Christian/Biblical worldview vs. another worldview that does not view the God of the Bible as the Creator and Designer of the bodies we are studying about?
  - 3) What particular parts of our study in Weeks 1-3 have been meaningful to you? Maybe you learned something that you didn't know before that you found really clever or had not thought about God's creativity in that way before...
  - 4) Answer this question as best as you can from what you believe to be a Christian/Biblical worldview: "How much effort do you think we should put into learning about and taking care of our bodies?"
- **TASK 4: Circulatory System Creative Project or Lab (Choose Option 1 or 2 Below)**  
**Option 1:** There are some super fun projects about the heart and blood on Pinterest that you might want to check out if you are a kinesthetic learner/crafty type person (<https://www.pinterest.com/racheldavis7/teaching-human-body-circulatory-system/>). Choose any kind of hands-on project that you find on Pinterest or an idea that you have yourself that helps you better learn the cardiovascular system material this week. Submit pictures of you and your project on Canvas by Monday, September 16. (A picture of a project alone will not be acceptable. You must be in the picture with your project in order for it to be accepted.)  
**Option 2: Complete the cardiology virtual lab on this website** (<https://www.biointeractive.org/classroom-resources/cardiology-virtual-lab>). Click "launch interactive" and follow the directions given on the. "The focus of this lab is on heritable diseases of the heart. You are cast here as a virtual intern to accompany a doctor examining three different patients. Each patient is examined, using more than one diagnostic tool, and at each stage, the doctor will invite you to examine the patient yourself and ask for your opinion." Make sure to screenshot your final quiz page showing your responses to all quizzes as documentation that you have completed the virtual lab.

**Module 2 Week 2: The Lymphatic & Immune Systems; Infectious Diseases, Week of September 16**

- **TASK 1:** Read pages 130-145 in your textbook ("The Lymphatic and Immune Systems"). I will upload a PowerPoint file that accompanies your textbook reading. Please go through the PowerPoint slides either before, during, or after your reading for re-enforcement of the content. If you choose to take your own notes, you are welcome to do so, but they will not be submitted this week. If you have questions about the content in the reading/PowerPoint, please let me know. I am happy to help answer any questions you may have.
- **TASK 2:** To count as your "notes" grade for this week, you will complete the "ASSESS" section in your textbook on pages 147-148 (# 1-14). Please upload a typed or handwritten file of the questions and correct answers (written out in words). A list of "A, B, C, A," etc. will not earn any credit. This assignment is due on Monday, September 23.
- **TASK 3:** The textbook presents a section on "Biology of Infectious Diseases" on pages 149-166. You are welcome to read this section, but it is not required. Instead, I would like for you to choose one infectious disease to learn more about in detail. Maybe you know someone who contracted an infectious disease that you would like to research or maybe you are planning to travel to or work in a country known for high prevalence of infectious disease...This may give you an idea of what you would like to focus on. Complete the assignment on infectious disease by Monday, September 23.
- **TASK 4:** Take Quiz 2: Module 2 Weeks 1 & 2. It will be available on Canvas on Monday, September 23 from 8:00 a.m. - 9:30 p.m. Once you open the quiz, you will have 35 minutes to complete it. Please plan ahead and schedule a 40-minute window on Monday, September 23 that

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<p>you will be available for this quiz. This quiz has 27 questions and will cover the cardiovascular system, lymphatic system, and immune system (pages 91-148 of your textbook).</p>
<p style="text-align: center;"><b>Module 3 Week 1: The Digestive System &amp; Nutrition, Week of September 23</b></p> <ul style="list-style-type: none"><li>• <b>TASK 1:</b> Download the Module 3 Week 1 guided reading notes. Read pages 169-183 ("Digestive System") and complete the guided reading notes. Upload your completed notes to Canvas by Monday, September 30.</li><li>• <b>TASK 2:</b> Read pages 184-192 about nutrition. Create a 5-day meal plan (15 total meals) based on the nutrition advice given in this section. When you finish creating your meal plan in the template provided, write a 500-word essay below the table as guided by the instructions. Upload your completed assignment to Canvas by Monday, September 30.</li><li>• <b>TASK 3:</b> Eat at least one healthy meal this week that follows the nutrition advice on pages 184-192. Take a picture of yourself with your meal and upload it to the discussion board on Canvas by Monday, September 30 at midnight. Write in the caption what you are eating and why it is nutritious.</li></ul>
<p style="text-align: center;"><b>Module 3 Week 2: The Respiratory System &amp; The Urinary System, Week of September 30</b></p> <ul style="list-style-type: none"><li>• <b>TASK 1:</b> Read pages 197-217 ("Respiratory System") and pages 218-237 ("Urinary System").</li><li>• <b>TASK 2:</b> Review the PowerPoint files I uploaded on the respiratory system and urinary system to aid your understanding of the reading.</li><li>• <b>TASK 3:</b> Complete the Assess Questions for both of the systems (pages 216-217 #1-15 and pages 236-237 #1-15). Please upload a typed or handwritten file of the questions and correct answers (written out in words). A list of "A, B, C, A," etc. will not earn any credit. These questions are due on Wednesday, October 9.</li><li>• <b>TASK 4:</b> Take Quiz 3: Module 3 Weeks 1 &amp; 2 on the digestive, respiratory, and urinary systems. The quiz will be open on Wednesday, October 9 from 8:00 a.m. - 9:30 p.m. Once you open the quiz, you will have 30 minutes to complete it. Please plan ahead and schedule a 30-minute window on Wednesday, October 9 that you will be available for this quiz. This quiz has 25 questions.</li></ul>
<p style="text-align: center;"><b>Module 4 Week 1: The Skeletal System, Week of October 7</b></p> <ul style="list-style-type: none"><li>• <b>TASK 1:</b> Read pages 238 – 259 ("Skeletal System") in your textbook and complete the accompanying note-taking guide. You will upload the note-taking guide by Monday, October 14.</li><li>• <b>TASK 2:</b> Complete the discussion board on skeletal system research questions. You will choose TWO of six questions to answer. Do your research, and write at least a 250-word response for each, fully addressing the questions. The response should be in your own words with your sources cited at bottom of your post. Post the question you chose followed by your response and sources used to this discussion board by Monday, October 14. (Please note that if you copy and paste from the internet without writing a response in your own words, you will not receive any credit for this assignment.)</li></ul>
<p style="text-align: center;"><b>Module 4 Week 2: The Muscular System, Week of October 14</b></p> <ul style="list-style-type: none"><li>• <b>TASK 1:</b> Download and complete the guided reading notes for the muscular system while reading along in your textbook (pages 260 – 281). Submit your completed notes by Monday, October 21.</li><li>• <b>TASK 2:</b> Please write at least a 250-word response to the discussion board prompt below and submit your response by Monday, October 21. Cite your sources below your response. You must use at least 2 reputable sources to receive full credit for this assignment. Note: If you have questions on how to distinguish a reputable, credible source, visit the CCU library and ask to speak with a librarian. 1. Read page 271 from your textbook and do some other research from valid sources about anabolic steroids. Present a brief summary in your own words that answers the following: (Answers copied and pasted from the internet will not receive credit.) a) What are anabolic steroids?</li></ul>

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- b) Why do some athletes want to use anabolic steroids?
- c) Why are anabolic steroids harmful?

2. Do you believe the techniques athletes use to train and enhance performance should be regulated? Why or why not? If so, who can or should enforce the regulation?

- **TASK 3:** Submit your topic idea for your final capstone paper by Monday, October 21.
- **TASK 4:** Take Quiz 4: Module 4: Weeks 1 & 2 on the skeletal and muscular system. The quiz will be open on Monday, October 21 from 8:00 a.m. - 9:30 p.m. Once you open the quiz, you will have 35 minutes to complete it. Please plan ahead and schedule a 35-minute window on Monday, October 21 that you will be available for this quiz. The quiz contains 28 questions.

**Module 5 Week 1: The Nervous System & Senses, Week of October 21**

- **TASK 1:** The Nervous System is complex and can be a daunting subject to study in one week. To help introduce you to the material, please watch the "How Do Nerves Work?" video.
- **TASK 2:** Carefully read pages 282-308 on the Nervous System and pages 309-330 on Senses. Then, complete the Assess Questions #1-16 on pages 307-308 and Assess Questions #1-16 on pages 328-330. (Note: You must write out the question and answer (in words) to receive credit for this assignment. A list of A, B, C, etc. will not be accepted for credit.) This assignment is due on Monday, October 28.
- **TASK 3:** The prevalence of mental health disorders and substance use have dramatically increased in the United States and around the world. Choose one mental disorder or related topic and discuss the following four points in your post. (Make sure you address all the questions in each point fully to receive full credit.) Your post must be at least 400 words or more to receive credit. Complete the "Nervous System and Senses and their Connection to Mental Health and Drug Dependence" Discussion Board by Monday, October 28.
  - 1) TOPIC. Which topic did you choose? Why did you choose this topic? Some ideas can be found on this website: <https://www.nimh.nih.gov/health/topics/index.shtml>
  - 2) SUMMARY. Write a brief summary of your topic. How does a person develop this disorder? What are its symptoms or effects? What connection does this have with material you learned in the Nervous System and Senses chapters?
  - 3) TREATMENT and PREVENTION. Is there treatment available? What can be done to alleviate its effects? Is there a way to prevent the onset of this disorder in others or to stop it from coming back once it has been treated?
  - 4) TRENDS. Is the prevalence of this disorder increasing or decreasing in America? Which age groups is it affecting the most? Is it growing or declining in other countries? Why do you believe this is the case? Does research support your hypothesis? (Cite sources of studies you mention.)
- **TASK 4:** Begin researching your final capstone paper topic. You have two weeks to write the introduction for your final capstone paper, which is due on Monday, November 4. (The entire paper will be due on Monday, December 9.) The introduction should be 1-2 pages and should include the information below. Please write clearly and concisely, keeping in mind what you will be writing in the rest of the paper. You want the material you write in these 1-2 pages to set the stage for the remainder of your paper.
  - 1) Explain your issue and how the issue applies to biology. (i.e. What did we cover in this class that informs your knowledge on the topic?) \*\*This is a biology class, so your biological explanation here should be college-level and thorough. \*\*
  - 2) Discuss the varying viewpoints on the topic. Explore how opinions on the topic may have changed over the course of recent history and why. Explain how people may have different views on the issue based on their faith, background, culture, etc.

**Module 5 Week 2: The Endocrine System, Week of October 28**

- **TASK 1:** Read pages 331 – 357 and complete the guided reading notes on the endocrine system (due Monday, November 4).

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- **TASK 2:** Finish and submit final capstone paper introduction (due Monday, November 4).
- **TASK 3:** Take Quiz 5: Module 5: Weeks 1 & 2 on the nervous system, senses, and endocrine system. The quiz will be open on Monday, November 4 from 8:00 a.m. - 9:30 p.m. Once you open the quiz, you will have 30 minutes to complete it. Please plan ahead and schedule a 30-minute window on Monday, November 4 that you will be available for this quiz. The quiz contains 24 questions.

**Module 6: Reproduction in Humans; Development & Aging, Week of November 4**

- **TASK 1:** Read pages 358 – 385 and complete the guided reading notes on the reproductive system. Submit your notes on Canvas by Monday, November 11.
- **TASK 2:** For this discussion board, you may CHOOSE ONE of the following options. Complete and submit your response by Monday, November 11. For either option, your post should be at least 250 words and should substantially answer the questions asked below.  
**Option 1:** We live in a very confusing world when it comes to hearing many mixed messages about human sexuality and reproduction. What does the Bible have to say about human sexuality and reproduction? Generally, discuss a biblical worldview of human sexuality and reproduction, citing biblical references to support your statements. (As always, the work should be your own. Copying and pasting from the internet will receive no credit.)  
**Option 2:** Research one of the following topics: abortion, birth control, infertility treatments OR female circumcision. Explain the issue and why it can be viewed as controversial, examining multiple perspectives on the issue. If you were working as a Christian counselor, how would you engage the issue you have written about from a biblical worldview as you work with and counsel clients? Is there a "right" or "wrong" way to view the issue? Why or why not?
- **TASK 3:** Read pages 386-410. As you read, compile a list of 20 highlights. These can be things that you didn't know before or find especially important about development and aging. Submit this assignment on Canvas by Monday, November 11.
- **TASK 4:** Aging adults experience greater risk of chronic disease such as heart disease, cancer, stroke, diabetes, or Alzheimer's disease. Of these common conditions, we know the least about the etiology of cancer and Alzheimer's disease and therefore are not able to prevent and treat these two conditions as effectively. Research either cancer or Alzheimer's disease from reputable sources and answer the following questions. If you choose cancer, you can choose cancer of a specific organ (e.g. lung cancer, colon cancer, etc.) or cancer in general. Submit your responses (at least 300 words total) with your reputable sources cited (at least 3) on Canvas by Monday, November 11.
  - 1) Currently, what do scientists believe causes the disease?
  - 2) Currently, what recommendations are there for helping prevent the disease?
  - 3) Currently, what treatments are available for the disease? How effective are these treatments?
  - 4) Currently, what research ideas are being tested to either prevent or better treat the disease in the future?

**Module 7: Human Genetics, Week of November 11**

- **TASK 1:** Watch "An Introduction to the Human Genome" video produced by Harvard University (5 min 35 sec). Then write a summary the information presented in the video (at least 250-word summary either in bullet points or paragraph form) and at least two questions you now have after watching this video. Submit your assignment on Canvas by Monday, November 18.  
[https://www.youtube.com/watch?v=jEJp7B6u\\_dY](https://www.youtube.com/watch?v=jEJp7B6u_dY)
- **TASK 2:** Read pages 434-452 on cancer. Answer the Assess (page 451 # 1-10) and Engage questions (page 452 #1-5). Submit a document with the questions and answers written out in words by Monday, November 18. As always, a document containing "A, B, C, etc." will not be accepted for credit.

**Cincinnati Christian University**  
**NSCI 220 99 Biology (Online)**  
**Fall 2019, 3 semester credit hours**

- **TASK 3:** Take Quiz 6 on the "An Introduction to the Human Genome" video and the cancer chapter. The quiz will be open on Monday, November 18 from 8:00 a.m. - 9:30 p.m. Once you open the quiz, you will have 25 minutes to complete it. Please plan ahead and schedule a 25-minute window on Monday, November 4 that you will be available for this quiz. The quiz contains 21 questions.
- **TASK 4:** Continue working on your final capstone paper, which is due on Monday, December 9.

**Module 8: Human Origins, Week of November 18**

- **TASK 1:** Watch the talk "One Race One Blood" by Ken Ham The talk is available at this link: <https://www.youtube.com/watch?v=KbODW6XO8zY>  
Start the video around the 5:00 mark and watch until the 1:02:00 mark. It will take you almost an hour, but it will be an hour well spent. It is up to you whether you agree with the information presented or not, but you will have a richer perspective on the Bible and human origins when you finish. You can just listen, but I think that the graphics are really helpful to visualize the genetics he mentions, so I would recommend watching so you can see the graphics. After watching the video, answer the following questions. Your answers are due on Canvas on Monday, December 2.
  - 1) What is the problem with marrying a close relative now? Why was marrying a close relative more common/not harmful in the beginning?
  - 2) What is the difference in viewing origins from the one tree vs. orchard perspective (kinds)?
  - 3) Explain natural selection vs. evolution.
  - 4) According to the Bible, how many "races" are there? Why is using the term "races" promoting a false idea?
  - 5) What is a more accurate term for "race"? What is a more accurate term for "skin color"?
  - 6) Does it make more sense to suppose Adam and Eve's skin could be coded as aabb, AABB, or AaBb?
  - 7) When considering marriage, what should be the most important consideration?
  - 8) Complete one of the following sentences "In this video I learned..." OR "After watching this video, I..."
- **TASK 2:** Your final capstone paper is due on Monday, December 9. If you have any questions about your paper, please feel free to e-mail me or set up an appointment with me to discuss your paper in more detail. Please put forth your best efforts in finishing this paper well.

**Final Capstone Paper, Week of December 2**

- **TASK 1:** Please review the final paper instructions document very thoroughly. This paper counts as 20% of your final grade for this class. Your grade will be based on the content of the paper, which must be structured according to these guidelines. Failure to follow the guidelines will result in a low score, as of course, will failure to write a thorough, comprehensive, biologically accurate paper. The paper is due Monday, December 9. If you have any questions, I would love to e-mail with you, chat by phone, or meet together in my office to discuss your ideas for the rest of the paper or to clarify any information in the instructions. Please be proactive in planning ahead and blocking off adequate time to focus on researching and writing.

*\*The instructor reserves the right to change or amend any part of this course plan as deemed necessary.*