

Syllabus

Course Overview

Course Overview

In this course, you will acquire an understanding of the structure and function of the human body. From cells and tissues to organs and organ systems, the body is organized at increasingly complex levels, and everything is related. The dynamic internal environment of the body requires complex communication mechanisms and feedback controls, all working together to maintain a steady state known as homeostasis.

Knowledge of human body systems will be used to further apply concepts to other areas in the Social Sciences. For example, how does the location of where you live impact your body with the food you eat or the exposure elements in your geographical location? Lastly, you will explore how media plays a role in the decisions you make and how that impacts your body.

Critical thinking and debates about topics will be components of the grade; they underscore the fact that biology is more than just facts—it requires comprehensive understanding and analysis of the issues facing us today. Discussions, interactive labs, patient case studies, and presentation analysis will ask you to think about the facts of human biology and what they mean to your life.

Course Structure

Have you really ever thought about how life begins and ends and all of the events that impact your body along the way? Throughout life, we experience many changes to our body, some that we have control over and some that we do not. In this course you will follow a 40-year-old woman named Tanya and explore the major body systems and how this impacts how she functions on a day-to-day basis. In addition, you will learn what things we cannot control with our genetics and how our body functions and some of the environmental factors that might actually change our code. Lastly, you will learn how biology is all around us and how media may impact the decisions we make with our body. Come join us on a journey to explore a broad perspective of the human body and the changes that take place over the course of a lifetime.

Theme 1: Human Body Systems Organization.

Theme 2: Application of Human Biology: The Social Sciences.

Theme 3: Human Biology and the Arts and Communications.

Assignments

Provide a list of your assignments here. Identify the weeks they appear in, provide a short description of the assignment. Include the percentage of the grade that will apply. Link the corresponding scoring guide.

Week 2: Complete an interactive lab on the Cardiovascular system. 5% of grade. **Scoring Guide.**

Week 3: Complete an interactive lab on the Urinary system. 5% of grade. **Scoring Guide.**

Week 4: Complete an interactive lab on the Digestive system. 5% of grade. **Scoring Guide.**

Week 5: Complete an interactive lab on the Genetic system. 5% of grade. **Scoring Guide.**

Week 8: Analyze four Patient Profiles, their medical histories and provide recommendations for each. 15% of grade. **Scoring Guide.**

Week 9: Evaluate the credibility of a news media article related to medical health news. Assignment grade weight. 15% of grade. **Scoring Guide.**

Week 10: Identify a time when the media or Internet influenced you with either accurate or inaccurate information, and create a presentation in which you provide a critical analysis of your findings. Assignment grade weight. 15% of grade. **Scoring Guide.**

Discussions

Participation in discussions will count for 35% of your final grade.

Week 1: Discuss how your own body systems must work together for you to function healthfully.

Week 2: Discuss cardiovascular system vital signs and how they are useful in everyday life.

Week 3: Engage in a discussion about Tanya's urinary symptoms—was it normal aging or diabetes insipidus?

Week 4: Engage in a discussion about energy drinks, their nutritional information, and whether or not they provide the body with energy.

Week 5: Discuss genetic diseases in families and the concept of gene therapy for providing hope for genetically inherited disorders.

Week 6: Engage in a discussion about whether genetics or the environment plays a bigger role on a human's behavior.

Week 7: Engage in a discussion about ethics, rights, and the Genetic Nondiscrimination Act of 2008.

Essential Undergraduate Learning Outcomes

All General Education courses reflect our Essential Undergraduate Learning Outcomes (EULOS). Review the [Essential Undergraduate Learning Outcomes](#) interactive media piece to learn more about these learning outcomes and how BIO1000 supports these outcomes.

Course Competencies

(Read Only)

To successfully complete this course, you will be expected to:

- 1 Describe the organization of the human body.
- 2 Apply concepts of human biology to the social sciences.
- 3 Evaluate human biological concepts as portrayed in the media.
- 4 Produce text with minimal grammar, usage, spelling, and mechanical errors.

Course Prerequisites

There are no prerequisites for this course.

Syllabus >> Course Materials

Required

The materials listed below are required to complete the learning activities in this course.

Integrated Materials

Many of your required books are available via the VitalSource Bookshelf link in the courseroom, located in your Course Tools. Registered learners in a Resource Kit program can access these materials using the courseroom link on the Friday before the course start date. Some materials are available only in hard-copy format or by using an access code. For these materials, you will receive an email with further instructions for access. Visit the [Course Materials](#) page on Campus for more information.

eBook

Ireland, K. A. (2018). *Visualizing human biology* (5th ed.). Hoboken, NJ: John Wiley and Sons. ISBN: 9781119398264.

Library

The following required readings are provided in the Capella University Library or linked directly in this course. To find specific readings by journal or book title, use [Journal and Book Locator](#). Refer to the [Journal and Book Locator library guide](#) to learn how to use this tool.

- Armstrong, P. W., & Naylor, C. D. (2019). [Counteracting health misinformation: A role for medical journals?](#) *Journal of the American Medical Association*, 321(19), 1863–1864.
- Bouchard, T. J., Lykken, D. T., McGue, M., Segal, N. L., & Tellegen, A. (1990). [Sources of human psychological differences: The Minnesota study of twins reared apart.](#) *Science*, 250(4978), 223.
- Chou, W. S., Oh, A., & Klein, W. M. P. (2018). [Addressing health-related misinformation on social media.](#) *Journal of the American Medical Association*, 320(23), 2417–2418.
- Erol, Ç. (2019). ["Medical misinformation - Vet the message."](#) *Anatolian Journal of Cardiology*, 21(2), 57–59.
- Lusk, J. (2019). [Consumer beliefs about healthy foods and diets.](#) *PLoS One*, 14(10).
- Merchant, R. M., & Asch, D. A. (2018). [The value of medical science in the age of social media and "fake news."](#) *Journal of the American Medical Association*, 320(23), 2415–2416.
- *NBC Nightly News*. (2018, March 9). [The FDA approves the first at-home genetic test that can assess a woman's risk for developing breast cancer \[News report transcript\].](#) NBCUniversal Media.
- Okie, S. (1999, June 29). [Experimental gene therapy gives hemophiliacs new hope: Treatment could be first step to cure.](#) *Florida Times Union*.
- Rothstein, M. A. (2018). [Time to end the use of genetic test results in life insurance underwriting.](#) *Journal of Law, Medicine & Ethics*, 46(3), 794–801.
- Seward, B. (2018). [Direct-to-consumer genetic testing: Finding a clear path forward.](#) *Therapeutic Innovation & Regulatory Science*, 52(4), 482–488.
- Spector-Bagdady, K. (2015). [Reconceptualizing consent for direct-to-consumer health services.](#) *American Journal of Law & Medicine*, 41(4), 568–616.
- Vogel, L. (2017). [Viral misinformation threatens public health.](#) *Canadian Medical Association Journal*, 189(50), E1567.

External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- American Cancer Society. (n.d.). [Breast cancer risk and prevention](https://www.cancer.org/cancer/breast-cancer/risk-and-prevention.html). Retrieved from <https://www.cancer.org/cancer/breast-cancer/risk-and-prevention.html>
- Centers for Disease and Control and Prevention. (2019). [Breast cancer statistics](https://www.cdc.gov/cancer/breast/statistics/). Retrieved from <https://www.cdc.gov/cancer/breast/statistics/>
- Dr. Glanc's Physio Videos. (2014). [Behavior genetics. Thomas Bouchard Jr \(U of Minnesota\) \[Video\]](https://youtu.be/lyT2AlzzzQs). Retrieved from <https://youtu.be/lyT2AlzzzQs>
- MedlinePlus. (n.d.). [Cancer](http://www.nlm.nih.gov/medlineplus/cancer.html). Retrieved from <http://www.nlm.nih.gov/medlineplus/cancer.html>
- [National Breast Cancer Foundation](https://www.nationalbreastcancer.org/). (2016). Retrieved from <https://www.nationalbreastcancer.org/>
- National Institute of Health: National Human Genome Research Institute. (2017). [Genetic discrimination](https://www.genome.gov/about-genomics/policy-issues/Genetic-Discrimination). Retrieved from <https://www.genome.gov/about-genomics/policy-issues/Genetic-Discrimination>
- [National Institutes of Health: National Cancer Institute](http://www.cancer.gov/). (n.d.). Retrieved from <http://www.cancer.gov/>
- National Institutes of Health: National Cancer Institute. (n.d.). [Breast cancer risk assessment risk calculator tool](https://bcrisktool.cancer.gov/calculator.html). Retrieved from <https://bcrisktool.cancer.gov/calculator.html>
- [Susan G. Komen](http://ww5.komen.org/). (n.d.). Retrieved from <http://ww5.komen.org/>
- U.S. Food and Drug Administration. (2019). [Direct-to-consumer tests](https://www.fda.gov/medical-devices/vitro-diagnostics/direct-consumer-tests). Retrieved from <https://www.fda.gov/medical-devices/vitro-diagnostics/direct-consumer-tests>

Suggested

The following materials are recommended to provide you with a better understanding of the topics in this course. These materials are not required to complete the course, but they are aligned to course activities and assessments and are highly recommended for your use.

Optional

The following optional materials are offered to provide you with a better understanding of the topics in this course. These materials are not required to complete the course.

Unit 1 >> Human Body Systems

Introduction

Introducing Tanya and Her Health Journey

Tanya, a woman in her early forties, has become more interested in her health since she last visited the doctor and was diagnosed with high blood pressure. While she has always been health conscious, she has lately become more interested in the biology of her own health. She has always understood the male and female body to be different, but she was surprised to learn there are only slight differences between the male and female body system, specifically the reproductive and endocrine systems.

Human biology covers all aspects of how the human body is organized. Throughout the course, you will be following the daily life of Tanya, a woman in her early forties, to learn how human biology affects us in our everyday life.

To better understand human biology, the body is broken down into smaller segments, which we refer to as human body systems. Each body system has unique functions, but in order for the body to function properly, all systems must be working.

This week, you will review the Human Body Systems Organization infographic to view the body systems. You will notice the various organs and tissues of each of the body systems and the overall function of each of the systems. In upcoming weeks, you will learn more specifics of each of the body systems and how the systems interact with each other.

To-Do List:

- **Discussion:** Discuss how your own body systems must work together for you to function healthfully.
- **What You Need To Know:** View the Human Body Systems Organization infographic.

Learning Activities

u01s1 - Activity Overview

Discussion Overview

This week, you will discuss how your own body systems must work together for you to function healthfully.

u01s2 - What You Need to Know

Human Body Systems Organization: Infrastructure, Regulations, Energy, and Reproduction Systems

First, we will begin by looking at Tanya's body systems. To better understand human biology, the body is broken down into smaller segments to study, which we refer to as human body systems.

Each of the body systems has unique functions, but in order for the body to function properly, all systems must be working. The four primary groups and body systems include:

1. Infrastructure – Skeletal, Muscular, Cardiovascular, and Nervous Systems.
2. Regulations Systems – Endocrine, Lymphatic, and Urinary Systems.
3. Energy – Digestive and Respiratory Systems.
4. Reproduction System.

View the [Human Body Systems Organization](#) infographic to examine their functions by selecting a body group and system to learn how each works.

Watch the [Cell Structure and Function](#) presentation to learn how the body works at a cellular level.

Use your *Visualizing Human Biology* text to learn more about the human body organization:

- Read Chapter 1, "What Is Life?" This chapter sets the stage for your exploration of the human body. Scientific knowledge and advances are obtained through the use of the scientific method, a systematic way of studying the natural world. Scientists use critical thinking and objective evaluation in their own studies and when assessing the work of others. You too must learn to evaluate information critically to determine the factual integrity and quality of the information you receive.
- Read Chapter 3, "Everyday Chemistry of Life." Organic molecules, built on atoms of carbon and at least one hydrogen atom, are the building blocks that make up all living things. This chapter describes the four classes of biological molecules. Knowledge of these types of molecules is essential for understanding the structure and function of cells, tissues, and organ systems.
- Read Chapter 4, "Cells: Organization and Communication." The human body contains trillions of cells. Each cell is highly organized, functioning and interacting to sustain life. This chapter explores how cells are built and how they operate—synthesizing molecules, bringing in substances, and releasing or keeping out others.

u01d1 - Write Your Discussion Post

Read the discussion participation scoring guide to learn how your instructor will evaluate your discussion participation throughout this course. After reviewing the resources in What You Need to Know, consider the following:

Think about what it means to be healthy. Have you had any injuries or illnesses, or are you in healthy? Select one of the body systems and explain if it is working properly. If yes, what do you need to do to maintain this? If not, what can you work on to maintain a healthier life?

Response Guidelines

Read the posts of your peers and respond to at least two. Explain similarities or differences you are experiencing with your own body. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

Unit 2 >> Body Infrastructure: Skeletal, Muscular, Cardiovascular, and Nervous Systems

Introduction

A Healthy Heart

Last night, Tanya woke up at 3:00 a.m. in a cold sweat. She was having difficulty breathing. She did not know if she was having a panic attack or if it was her heart. As she drank a glass of water, her mind started to race. Two years earlier, her mom had a heart attack. Tanya generally follows a good diet and she exercises, but she also knows that genetics plays a role.

Do you think she had heart trouble, or was her mind playing tricks on her?

Prevention of cardiovascular disease is important. Heart function and fluid circulation are all regulated by the nervous system. Nerves are stimulated for voluntary movements of muscles, but also involuntary actions like the beating of the heart. The heart is a cardiac muscle that never stops. This week, we take a closer look at the skeletal, muscular, cardiovascular, and nervous system to learn about how they function in Tanya's body.

To-Do List:

- **What You Need to Know:** Explore the Human Body Systems Organization infographic to review the human body infrastructure to identify the major functions of the muscular, skeletal, cardiovascular, and nervous systems.
- **Discussion:** Discuss vital signs related to the cardiovascular system and how they are useful in everyday life.
- **Assignment:** Complete a lab on the cardiovascular system.

Learning Activities

u02s1 - Activity Overview

Discussion Overview

You will engage in a discussion that addresses vital signs related to the cardiovascular system and how they are useful in everyday life. In this week's introduction, Tanya is experiencing symptoms that might be related to a sign of heart trouble. With these symptoms, it is important to determine if Tanya is having a heart attack or a wake-up call.

Assignment Overview

Complete an interactive lab on the cardiovascular system.

u02s2 - What You Need to Know

Human Body Systems Organization: Skeletal, Muscular, Nervous, and Cardiovascular Systems

To understand the human body and how we can organize it into four main groups, we take a closer look at each one of these main groups—skeletal, muscular, nervous, and cardiovascular:

1. The skeletal system gives the body its shape, protects soft organs, and interacts with muscles for movement.
2. The muscular system gives the body the ability to move by pulling on our bones.
3. The nervous system is the messaging system of the body. It is responsible for carrying signals to the brain while others carry messages from the brain.
4. The cardiovascular system in the human body moves blood to transport gases to and from tissues, circulate chemical messages such as hormones, and distribute nutritional substances.

View the [Human Body Systems Organization](#) infographic by selecting a group and then learning how each of the four main groups work.

Watch these three presentations that focus on the skeletal, muscular, and cardiovascular systems within the human body:

- [Bone Remodeling](#) focuses on the details of bone and bone growth.
- [Muscle Contraction](#) looks at the various details of the muscles and how they function and contract.
- [Cardiac Cycle and Blood Circulation](#) helps you learn more about how the cardiovascular system works in your body.

Use your *Visualizing Human Biology* text to learn more about the human body:

- Read Chapter 6, "The Skeletomuscular System," to provide you with details on how the skeletal and muscular systems work together. Without our muscles and bones, we would not be able to move.
- Read Chapter 7, "The Nervous System," to learn how your brain controls your body. Have you ever had to think about breathing think about blinking your eyes? Our brain, the control center, does this for us everyday.
- Read Chapter 13, "Cardiovascular System," to learn more about your heart, and how to keep it healthy. Working 24 hours a day, your heart really gets a workout. What can you do to prevent your heart from failing?

u02d1 - Write Your Discussion Post

Vital signs, including your blood pressure and pulse, are useful in everyday life. Lab tests help us monitor our health. If you know the normal parameters, you can complete a quick check on your health. If the heart rate is elevated at rest, or if it takes the numbers extended periods of time to return to normal, this may be a sign for concern. Many forms of heart disease can be prevented or treated with healthy lifestyle choices, yet heart disease continues to cause a large number of deaths each year.

Now that you have learned a little bit more about cardiovascular health, do you think Tanya was having a heart attack, or was her mind playing tricks on her? What symptoms could be consistent with your diagnosis? Is there anything unusual?

Support your answer with at least one resource from the week. Review the basics in your *Visualizing Human Biology* text.

Response Guidelines

Read the posts of your peers and respond to at least two. In each case, regardless of your own position, identify the difficulties in enacting the learner's proposal. Explain why you think these difficulties are important to consider, and invite a response. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

u02a1 - Homework: Cardiovascular System Lab

Overview

The following lab is the first of four you complete in this course. In this lab, you compare Tanya and Lorraine's cardiovascular health:

- [Cardiovascular Lab](#).

Instructions

Remember the following as you go through the lab:

- Complete the assessment at the end of the lab. To do this, fill out the items requested within the lab, download that document or documents to your computer, and save it. You must attach the documents to the assignment and then submit the assignment.
- Make sure that you read the Homework: Cardiovascular System Lab Scoring Guide prior to submitting your document to ensure you have met all of the expectations for this assignment.
- It is recommended to review the scoring guide prior to downloading your document or documents to your computer, since all work must be completed within the lab.
- All assignments are due at end of the week unless otherwise specified.

Competencies Measured

By successfully completing this assignment, you will demonstrate your proficiency in the following course competencies and assessment criteria:

- Competency 1: Describe the organization of the human body.
 - Explain what blood pressure means.
 - Explain what heart rate measures.
 - Explain the correlation between heart rate and blood pressure.
 - Evaluate cardiovascular results in patients.

Unit 3 >> Body Regulation: Endocrine, Lymphatic, and Urinary Systems

Introduction

Body Changes Over Time

Tanya has been noticing many changes in her forties. She learns that some of these changes are due to changes in her endocrine system. For example, she is getting up more frequently at night to go to the bathroom. She is experiencing lower metabolic rates, which leads to the increase in body heat production and increased levels of body fat. She is getting sick more often and having a hard time fighting off disease.

The changes Tanya is experiencing could be caused by changes to her endocrine system. The endocrine system is responsible for secretion and regulation of hormones, and hormone production does decline as we age. This week, we take a closer look at these body systems that help regulate our bodies.

To understand body regulation, we will examine the endocrine, lymphatic, and urinary systems—and the roles that they play. The glands of the endocrine system regulate hormones throughout the body. The hormones regulate many body functions such as growth and metabolism. The lymphatic system helps regulated unwanted chemicals and toxins in the body through a system of tissues and organs. Without the lymphatic system, we would not be able to fight off disease. The urinary system also gets rid of waste from the blood. Our body depends on this system to regulate the fluid balance within our body.

To-Do List:

- **What You Need to Know:** View the Human Body Systems Organization infographic and be able to identify the major functions of the endocrine, lymphatic, and urinary systems.
- **Discussion:** Engage in a discussion about Tanya's urinary symptoms—was it normal aging or diabetes insipidus?
- **Assignment:** Complete an interactive lab on the urinary system.

Learning Activities

u03s1 - Activity Overview

Discussion Overview

This discussion addresses Tanya's urinary system and the symptoms she is experiencing.

Assignment Overview

Complete an interactive lab on the urinary system. In this lab, you review the urinalysis test results of Tanya's two friends, Marcus and Darlene, to see what their urine can tell about their health status.

u03s2 - What You Need to Know

Human Body Systems Organization: Endocrine, Lymphatic, and Urinary Systems

To understand the human body and how it regulates the endocrine, lymphatic, and urinary systems, we will take a closer look at each one of these systems and how it regulates the human body:

1. The endocrine system contains trillions of cells that operate in coordination with one another. It is a collection of glands that produce hormones that regulate metabolism, growth and development, tissue function, sexual function, reproduction, sleep, and mood.
2. The lymphatic system is a network of delicate tubes throughout the body. It drains fluid (called lymph) that has leaked from the blood vessels into the tissues and empties it back into the bloodstream via the lymph nodes.
3. The urinary system (also known as the renal system) produces, stores, and eliminates urine. The kidneys make urine by filtering wastes and extra water from the blood. Urine travels from the kidneys through two thin tubes called ureters in order to fill the bladder.

View the [Human Body Systems Organization](#) infographic by selecting a group and learning how these groups work.

Watch the [Kidneys](#) presentation (07:16 minutes) to help you better understand the function of the urinary system.

Use your *Visualizing Human Biology* text to read more about the lymphatic, urinary, and endocrine systems:

- Read Chapter 9, "Immunity and the Lymphatic Systems," to learn more about what is happening inside you when you catch a cold or have a bacterial infection. Without our awareness, every day we are constantly preventing, detecting, and fighting health threats.
- Read Chapter 17, "The Urinary System," to learn about how important our kidneys are to remove fluid and waste from our bodies. Do you know anyone who has to have dialysis on a regular basis?
- Read Chapter 18, "The Endocrine System and Development" to learn more about hormone production throughout life. Do you know when males and females start and end hormone production?

u03d1 - Write Your Discussion Post

Over the last few months, Tanya has been getting up to go the bathroom once or twice a night. During the day, she usually goes every hour. At first, she thought it was part of aging. She also drinks a lot of water and coffee during the day. She was also experiencing extreme thirst. However, the symptoms were not going away, so she went to the doctor. The doctor first performed a urinalysis, which revealed nothing. The doctor then ordered an MRI and water deprivation test, and she was diagnosed with diabetes insipidus.

Was it incontinence or coincidence? In your post, think how Tanya might have confused the symptoms of diabetes insipidus with normal aging. What causes diabetes insipidus? Review the basics in your *Visualizing Human Biology* text. You are welcome to but not required to support your ideas with information from this week's readings or from the Capella library, to increase your understanding.

Response Guidelines

Read the posts of your peers and respond to at least two. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

u03a1 - Homework: Urinary System Lab

Overview

This assignment is about the urinary system. In the following lab, you will review the lab results of Tanya's friends, Marcus and Darlene. Review their labs to see what information is provided in their urine:

- [Urinary Lab](#).

Instructions

Remember the following as you go through the lab:

- Complete the assessment at the end of the lab. To do this, fill out the items requested within the lab, download that document or documents to your computer, and save it. You must attach the documents to the assignment and then submit the assignment.
- Make sure that you read the Homework: Urinary System Lab Scoring Guide prior to submitting your document to ensure you have met all of the expectations for this assignment.
- It is recommended to review the scoring guide prior to downloading your document, or documents, to your computer, since all work must be completed within the lab.
- All assignments are due at end of the week unless otherwise specified.

Competencies Measured

By successfully completing this assignment, you will demonstrate your proficiency in the following course competencies and assessment criteria:

- Competency 1: Describe the organization of the human body.
 - Explain the purpose and importance of the urinalysis in a routine physical.
 - Explain what diabetes is and the difference between type 1 and type 2 diabetes.
 - Explain why blood may be in the urine.
 - Explain the condition that would explain a patient's results.
 - Document urinalysis results appropriately.

Unit 4 >> Body Energy: Digestive and Respiratory

Introduction

Energy in the Human Body

Tanya has recently stepped up her exercise routine. Often, she does not have much time to eat after the gym and is looking into energy drinks to provide her nutrition and a bit of "extra" energy. However, she is wondering if energy drinks actually give her any energy.

All body systems need energy to function. The body fuels cells with the nutrients and gases necessary to function properly. Our body takes in oxygen and circulates it through the bloodstream. Many chemical reactions in the body require cellular energy and need oxygen to drive these reactions. Some of these reactions are used to break down food and metabolize what we eat, which is a part of the digestive system.

As Tanya ages, her metabolism decreases. The food she eats impacts the energy she needs to function. Not enough food or too much food can also impact her body functions. What can she do to get the proper nutrients but not gain weight? Let us take a closer look at the digestive and respiratory systems to learn about how they function in Tanya's body and how Tanya gets energy.

The body needs energy to live. The digestive and respiratory systems work to provide this energy with nutrients and oxygen. We eat food to provide energy to our cells. The digestive system breaks the food down into smaller macromolecules that the cells can process for energy. In order for the cells to utilize the nutrients, oxygen from the respiratory system is needed. The respiratory system takes in oxygen from the air and helps to expel the carbon dioxide we generate.

To-Do List:

- **What You Need to Know:** View the Human Body Systems Organization infographic and be able to identify the major functions of the digestive and respiratory systems.
- **Discussion:** Engage in a discussion about energy drinks, their nutritional information, and value.
- **Assignment:** Complete a lab on the digestive system.

Learning Activities

u04s1 - Activity Overview

Discussion Overview

In this discussion, you will talk about energy drinks, including their nutritional information and value.

Assignment Overview

Complete an interactive lab on the digestive system. In the lab, you will be able to identify the major functions of the digestive and respiratory systems.

u04s2 - What You Need to Know

Human Body Systems Organization: Digestive and Respiratory Systems

Our body systems need energy to function. Where does the energy come from? The body fuels its cells with nutrients and gases for the cells to function properly. Our body takes in oxygen and circulates it through the bloodstream. Many chemical reactions in the body require cellular energy and need oxygen to drive these reactions. For example:

1. **Digestive System:** The digestive system is a group of organs that break down food in order to absorb its nutrients.
2. **Respiratory System:** The respiratory system works with the digestive system as the digestive tract uses contractions from muscles to break down the food and move it through the tract.

View the [Human Body Systems Organization](#) infographic by selecting a system to learn how these two systems work.

Watch the [Digestion](#) presentation on the human digestive system that focuses on the gut, mouth, pharynx, esophagus, epiglottis, small intestine, pancreas, gallbladder, liver, and large intestine.

You may also want to read the following:

- Lusk, J. (2019). [Consumer beliefs about healthy foods and diets](#). *PLoS One*, 14(10).

Use your *Visualizing Human Biology* text to read about the digestive and respiratory systems:

- Read Chapter 14, "The Respiratory System: Movement to Air," to learn more about the air we breathe. How often do you take a breath? Do you ever think about breathing?
- Read Chapter 15, "Nutrition: You Are What You Eat," to learn how the digestive system breaks down these molecules into usable units of energy. "You are what you eat," is a popular phrase. But it is true?
- Read Chapter 16, "The Digestive System," to learn more about the process of digestion. We eat three to five pounds of food each day to provide us with energy.

u04d1 - Write Your Discussion Post

Energy drinks can be found at almost every convenience store. However, there are conflicting opinions on their validity. For this discussion, research three different energy drinks, for example, "Monster," "5-hour ENERGY," or "Red Bull." Which one would you choose for Tanya to drink after an intense workout? Provide some detail about the nutritional information and calories of the drinks. Then, consider what it means to have energy. Are there healthier ingredients that can help Tanya get the energy she needs to exercise? If so, what are they?

Review the basics in your *Visualizing Human Biology* text, or you are welcome but not required to support your ideas with information from this week's readings or from the Capella library to increase your understanding of the dynamics of energy drinks.

Response Guidelines

Read the posts of your peers and respond to at least two asking questions or adding further information to their ideas. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

u04a1 - Homework: Digestive System Lab

Overview

In this week's lab, you will be looking at food labels. Food labels provide important information about the nutrient content of packaged food. You will analyze a food label from your own kitchen and discuss whether the food item is a healthy choice:

- [Digestion Lab](#).

Instructions

Remember the following as you go through the lab:

- Complete the assessment at the end of the lab. To do this, fill out the items requested within the lab, download that document or documents to your computer, and save it. You must attach the documents to the assignment and then submit the assignment.
- Make sure that you read the Homework: Digestive System Lab Scoring Guide prior to submitting your document to ensure you have met all of the expectations for this assignment.
- It is recommended to review the scoring guide prior to downloading your document, or documents, to your computer, since all work must be completed within the lab.
- All assignments are due at end of the week unless otherwise specified.

Competencies Measured

By successfully completing this assignment, you will demonstrate your proficiency in the following course competencies and assessment criteria:

- Competency 1: Describe the organization of the human body.
 - Estimate daily caloric need.
 - Calculate percentage of daily calories of the food item.
 - List serving size and calories in a serving, and calories from fats.
 - List the sodium content, carbohydrates, sugar, protein, vitamins, and minerals found in the food item.
 - Analyze the food item based on label.
 - Analyze if packaging is misleading.

Unit 5 >> Reproduction and Genetics

Introduction

Genetic Inheritance

When Tanya was in her late 20s, she was fortunate enough to have two children. At her prenatal physicals, family history questions were asked about her and their biological father, Christopher. Tanya was not aware of any family diseases because she was adopted, but Christopher was aware that his family had a history of cystic fibrosis.

Cystic fibrosis is a genetically inherited disease. We are born with a genetic code that is a culmination of genes from our parents and generations before us. Genetics can play a role in the traits that are inherited, but the environment around us can also impact our traits. Tanya and Christopher were told they could benefit from a genetic counselor with a pedigree analysis, but with Tanya's family history unknown, it could be difficult.

The reproductive systems in males and females are different but have the common goal of continuation of human species. We will look closely at the reproductive systems in males and females and inheritance of genes this week. Further, we will discuss genetic diseases in families and the concept of gene therapy for providing hope for genetically inherited disorders. Genetics can play a role in the traits that inherit, but the environment around us can also impact our traits. We are born with a genetic code that is a culmination of genes from our parents and generations before us.

To-Do List:

- **What You Need to Know:** Examine the major functions of the male and female reproductive systems in the Human Body Systems Organization infographic.
- **Discussion:** Engage in a discussion about genetic diseases and the concept of gene therapy.
- **Assignment:** Complete an interactive lab on the genetics system.

Learning Activities

u05s1 - Activity Overview

Discussion Overview

This week, you will discuss genetic diseases in families and the concept of gene therapy for providing hope for genetically inherited disorders.

Assignment Overview

Complete an interactive lab on the genetic system.

u05s2 - What You Need to Know

Human Body Systems Organization: Reproductive and Genetics Systems

Genetics can play a role in the traits we inherit, but the environment around us can also impact our traits. We are born with a genetic code that is a culmination of genes from our parents and generations before us.

The reproductive systems in males and females are different but have the common goal of continuation of human species. The major function of the reproductive system is to ensure survival of the species. This week, we take a closer look at the reproductive system.

- View the [Human Body Systems Organization](#) infographic by selecting the system to learn how functions.
- Read [Experimental Gene Therapy Gives Hemophiliacs New Hope: Treatment Could Be First Step to Cure](#).

Use your *Visualizing Human Biology* text to read about the reproductive and genetics systems.

- Read Chapter 19, "The Reproductive Systems: Maintaining the Species," to learn more about the reproductive systems. What are main differences between males and females when it comes to reproduction?
- Read Chapter 21, "Inheritance, Genetics, and Molecular Biology," to learn more about gene expression and inheritance. What are main differences between males and females? Why do I look like my mom and grandma, but not my dad?

u05d1 - Write Your Discussion Post

Genetic diseases in families often are "hidden" if they are a recessive trait, such as cystic fibrosis or sickle-cell anemia. Gene therapy provides new hope for genetically inherited disorders like sickle-cell anemia.

For this discussion, answer the following:

- Do you think gene therapy to "fix" genes might cross the lines of "unethical" research?
 - Do you think there might be risks to a procedure?

Review the basics in your *Visualizing Human Biology* text. You are also welcome but not required to use the Capella library to increase your understanding of the dynamics of this disease.

Response Guidelines

Read the posts of your peers and respond to at least two asking questions or adding further information to their ideas. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

u05a1 - Homework: Genetics Lab

Overview

In this week's lab, you will analyze the pedigree chart and karyotype for two patients, Kayla and Emily. A karyotype is a picture of stained chromosomes arranged to show chromosome pairs. Abnormalities in chromosome number or size can be easily identified in a karyotype. Pedigree charts give a symbolic representation of phenotypic (observable) traits through a family. Using a pedigree, researchers can trace the pathway of a disease through families:

- [Genetics Lab](#).

Instructions

Remember the following as you go through the lab:

- Complete the assessment at the end of the lab. To do this, fill out the items requested within the lab, download that document or documents to your computer, and save it. You must attach the documents to the assignment and then submit the assignment.
- Make sure that you read the Homework: Genetics System Lab Scoring Guide prior to submitting your document to ensure you have met all of the expectations for this assignment.
- It is recommended to review the scoring guide prior to downloading your document, or documents, to your computer, since all work must be completed within the lab.
- All assignments are due at end of the week unless otherwise specified.

Competencies Measured

- Competency 1: Describe the organization of the human body.
 - Explain the inheritance of an autosomal recessive trait by reading a pedigree.
 - Explain the gender of the second patient in a lab scenario.
 - Explain the results of a karyotype.
 - Discuss how a disorder that results from chromosomal abnormalities affects body systems.

Unit 6 >> Genetics and the Environment

Introduction

Nature Versus Nurture

Tanya and Christopher's meetings with the genetic counselor sparked interest in a direct consumer genetic test, "23 and Me." Tanya had always known she was adopted but received a surprise with the results of this test: she discovered she had an identical twin! She searched different courses and talked to people at her own adoption agency, and she found out that her twin was raised only 130 miles from her hometown. Tanya made plans to finally meet her biological sibling. She was curious if they would share many similarities, since different families in different parts of the United States raised them.

Our genetic code makes us unique. Even though you may have siblings with the same parents, no two people have the same genetic code except for identical twins. Many studies have been conducted to determine the impact of our environment on our genetic code. Where we live and what we eat can impact our body systems, but to what degree is still not known.

This week, you will take a closer look at "nature" versus "nurture" and learn how the environment may or may not impact our genetic code. We will take a closer look at the research behind "nature" versus "nurture."

To-Do List:

- **What You Need to Know:** Explore the science behind "nature" versus "nurture."
- **Discussion:** Engage in a discussion about whether genetics or the environment plays a bigger role on a human's behavior.

Learning Activities

u06s1 - Activity Overview

Discussion Overview

You will engage in a discussion about "nature" versus "nurture" and how the environment may or may not impact your genetic code.

u06s2 - What You Need to Know

Nature Versus Nurture

This week, take a closer look at the research behind "nature" versus "nurture" and learn how the environment may or may not impact our genetic code.

- Watch "[Behavior Genetics, Thomas Bouchard Jr \(U of Minnesota\)](#)" to learn more about the University of Minnesota study of identical twins who were raised apart.
- Read the results from study conducted on twins who were reared apart, "[Sources of Human Psychological Differences: The Minnesota Study of Twins Reared Apart.](#)"

u06d1 - Write Your Discussion Post

There have been many studies on twins separated at birth and reunited later. A 2018 documentary, *Three Identical Strangers*, tells the story of triplets separated at birth purely for the purposes of study. You also read about the Minnesota Twins study this week. Based on your readings and your own opinions, consider the following:

- Do you think genetics or environment play a bigger role on a human's behavior?
- Based on the results of this study, are twins reared apart really different?
- Do you see similarities with your siblings, your children, or your parents and their siblings?

Support your ideas with at least one credible source, such as a recently published article from the Capella library, to increase your understanding of the dynamics of this idea.

Response Guidelines

Read the posts of your peers and respond to at least two asking questions or adding further information to their ideas. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

Unit 7 >> Ancestral Answers

Introduction

Connecting Genetics to Your Ancestors

The "23 and Me" test provided Tanya with the surprising news that she had a twin; however, the test sparked even more curiosity about her ancestry. She always suspected her ancestry was German, but she was surprised to find she was also Greek.

Genetic testing also provides knowledge of genetic diseases. In recent years, genetic testing has become a direct-to-consumer market where individuals can get the results sent to their home and not to their doctor. While companies have received clearance from the FDA, some states still do not allow access to these results.

We might be able to change outside factors in our lives, but we cannot change our genetic code. In the recent years, with the advances in genetic testing, we can predict and prevent many diseases that might be in our genetic code. Questions exist on who owns the information in our genetic code when genetic tests are taken. Although legislation such as the Genetic Nondiscrimination Act of 2008 was passed that prohibits insurance companies and

employers from genetic discrimination, databases with genetic test results are being collected as a result of the new direct-to-consumer market. This week, we take a closer look at the research and views related to this subject.

To-Do List:

- **What You Need to Know:** Explore information related to the Genetic Nondiscrimination Act of 2008.
- **Discussion:** Engage in a discussion related to ethics, rights, and genetic test results.

Learning Activities

u07s1 - Activity Overview

Discussion Overview

You will discuss topics related to ethics, rights, and genetic test results in addition to exploring consumer access to genetic testing.

u07s2 - What You Need to Know

Genetic Information Nondiscrimination Act of 2008 and DNA Ancestry Tests

Have you ever wanted to know more about where exactly you came from? It has never been easier to find out thanks to the explosion of at-home DNA testing kits. Millions of people have tried them, resulting in a great surge in popularity.

Genetic testing, also known as DNA testing, allows an individual to receive a genetic diagnosis of their vulnerabilities to inherited diseases. In general, this helps determine an individual's ancestry or biological relationships between people. Watch the news clip and read the articles to learn more information.

- U.S. Food and Drug Administration. (2019). Direct-to-consumer tests. Retrieved from <https://www.fda.gov/medical-devices/vitro-diagnostics/direct-consumer-tests>
- Seward, B. (2018). Direct-to-consumer genetic testing: Finding a clear path forward. *Therapeutic Innovation & Regulatory Science*, 52(4), 482–488.
- Rothstein, M. A. (2018). Time to end the use of genetic test results in life insurance underwriting. *Journal of Law, Medicine & Ethics*, 46(3), 794–801.
- Spector-Bagdady, K. (2015). Reconceptualizing consent for direct-to-consumer health services. *American Journal of Law & Medicine*, 41(4), 568–616.

In addition, consider the work of the National Institutes of Health's (NIH) National Genome Research Institute to prevent genetic discrimination: "Many Americans fear that participating in research or undergoing genetic testing will lead to being discriminated against based on their genetics. Such fears may dissuade patients from taking genomics-based clinical tests or volunteering to participate in the research necessary for the development of new tests, therapies, and cures. To address this, in 2008 the Genetic Information Nondiscrimination Act (GINA) was passed into law, prohibiting discrimination by employers and health insurers" (National Human Genome Research Institute, 2017).

Find more about the NIH's work as you read the Genetic Information Nondiscrimination Act of 2008 that prohibits insurance companies and employers from genetic discrimination:

- "Genetic Discrimination."

Reference

National Institutes of Health: National Human Genome Research Institute. (2017). Genetic discrimination. Retrieved from <https://www.genome.gov/about-genomics/policy-issues/Genetic-Discrimination>

u07d1 - Write Your Discussion Post

In the Seward (2018) article, "[Direct-to-Consumer Genetic Testing: Finding a Clear Path Forward](#)," review Table 1 to view the DTC Genetic Testing Access by State. Find your state to determine if you would have access.

Do you think individuals should be allowed to have access to direct to consumer genetic testing? What are some of the benefits of this? On the other hand, what are some of the concerns?

Response Guidelines

Read the posts of your peers and respond to at least two asking questions or adding further information to their ideas. Be sure to respond to any questions posed to you by your peers or instructor.

Course Resources

Undergraduate Discussion Participation Scoring Guide

Unit 8 >> Cancer Causes

Introduction

When Genes Deliver Bad News

Tanya has received some troubling results from her "23 and Me" DNA test. She has inherited BRCA1 gene for breast cancer. As she does not know much about her family history, she is overwhelmed with this information.

Cancer is a nonselective disease. Cancer can occur at any age, and although treatments have been improved, cancer still can be a deadly disease. Some cancer is linked to environmental causes such as cigarette smoke or UV radiation. Other causes may be genetic, such as inheriting the gene for breast cancer. Early detection can impact the outcome of cancer; therefore, it is important to recognize early symptoms and tests for prevention.

To-Do List:

- **What You Need to Know:** Examine the information related to cancer biology and environmental factors.
- **Assignment:** Analyze patient profiles and explore the information and research related to cancer biology and environmental factors.

Learning Activities

u08s1 - Activity Overview

Assignment Overview

This assignment focuses on cancer risks and causes. You will analyze four patient profiles. Then, you will explore the research information related to cancer biology and environmental factors and make recommendations for each patient.

u08s2 - What You Need to Know

Breast Cancer Risks, Genetics, and the Environment

Read the transcript of the NBC Nightly News report, "[The FDA Approves the First At-Home Genetic Test That Can Assess a Woman's Risk for Developing Breast Cancer](#)." The company 23andMe promises genetic information made easy. They have sold the first FDA-approved home test for breast cancer risk. It tests for three specific mutations including BRCA1, which causes 55 to 65 percent of women to develop cancer.

Review the cancer risks Internet resources listed below. You will use these resources for your Homework: Patient Case Study Profiles – Cancer Causes assignment due this week.

- National Institutes of Health: National Cancer Institute: [Breast Cancer Risk Assessment Risk Calculator Tool](#).
- American Cancer Society: [Breast Cancer Risk and Prevention](#).
- Center for Disease Control: [Breast Cancer Statistics](#).
- [National Breast Cancer Foundation](#).
- [National Cancer Institute](#).
- [Susan G. Komen](#).
- MedlinePlus: [Cancer](#).

Use Chapter 12 in your *Visualizing Human Biology* text to learn about cancer biology, causes, risks, genetics, and prevention. Why do some people get cancer, and some do not, even if they are related and have the same environment?

u08a1 - Homework: Patient Case Study Profiles – Cancer Causes

Overview

Even though Tanya has the breast cancer gene, it does not necessarily mean she will ever develop breast cancer. However, she does have a chance. In this assignment, you are going to evaluate the medical histories and breast cancer risks of Tanya's friends, and estimate how they might reduce their risks. You will learn about the various risk factors, both genetic and lifestyle related, as well as prevention methods for breast cancer.

Instructions

For this assignment, you will use a [Patient Case Study Profile Form](#) to evaluate four patient profiles and their medical histories. Refer to the resources listed in the *What You Need To Know* section.

1. Examine the four patient profiles and medical histories of Tanya's friends (Mary, Paula, June, and Nora) with respect to their breast cancer risk.
2. Use the various resources presented this week to help you analyze the cancer causes for each profile.
3. Use the National Cancer Institute's [Breast Cancer Risk Assessment Risk Calculator Tool](#) to estimate the patient's risks of developing breast cancer.
4. Provide recommendations for each patient profile as to how they might reduce their cancer risk.
5. Enter your recommendations in the Patient Case Study Profile Form next to each patient profile.
6. Submit your completed document in the assignment area of the courseroom. All assignments are due at end of the week, unless otherwise specified.

Competencies Measured

By successfully completing this assignment, you will demonstrate your proficiency in the following course competencies and assessment criteria:

- Competency 2: Apply concepts of human biology to the social sciences.
 - Examine each patient profile and cancer risks.
 - Analyze each patient profile cancer risks and causes using provided resources.
 - Use the risk calculator to estimate the patient's risks of developing breast cancer.
 - Recommend how each patient might reduce their risk of cancer.

Unit 9 >> Truth or Lies

Introduction

Fake News Versus Real News

Tanya has been thinking about what to do with the information about the BRCA1 gene. She hears many things on TV and social media related to the choices she should make with food, exercise, diet, and other medical advice. Last night while watching TV, she

heard a remarkable story about a woman who was cured from breast cancer.

Tanya looked up this cure on the Internet, and the Internet said it was true. How do we know if what we hear on TV and social media is true? Is it based on science or opinion?

Many sources exist to find information, such as TV, Internet, newspapers, magazines, and medical journals, to name a few. Learning how to evaluate sources of media can be an important skill to make the best decisions for your health care or the health care of your family. How do you know if a source is credible, and what can we do to counteract medical misinformation?

To-Do List:

- **What You Need to Know:** Determine how to evaluate media for scientific credibility.
- **Assignment:** Evaluate the credibility and accuracy of a news media article related to human biology.

Course Resources

[Week 9 Hook Image](#) | [Transcript](#)

Learning Activities

u09s1 - Activity Overview

Assignment Overview

You will identify ways to counteract medical misinformation and complete the Media Misinformation Source Evaluation Form. In addition, the credibility of the additional source you find will be evaluated.

u09s2 - What You Need to Know

Evaluating Scientific Information

Distinguishing between science and "fake science" can be difficult. When trying to discern whether something is scientific, check the following:

- **Interest:** Who is funding the research, and who may profit from it? Biased organizations may give themselves neutral-sounding names. An organization will often have an interest in the outcome of a study they are funding.
- **Author and Publisher:** Who conducted the research? Where was it done? Where was it published? Look at the background of the people involved in the research, if possible. Have they published other papers on the topic? Was the work conducted at an established facility that could provide the support necessary to conduct thorough research? Scientists publish their results in peer-reviewed journals so that others in the same field can critically evaluate their work. View with suspicion any discoveries that are "secret" or rely on "secret formulas." Results that have been originally published in journals such as *Science*, *Nature*, and *The New England Journal of Medicine* will have been examined more closely.

Misinformation in the Media

Use the Capella library to read articles related to misinformation in the news:

- Chou, W. S., Oh, A., & Klein, W. M. P. (2018). [Addressing health-related misinformation on social media](#). *Journal of the American Medical Association*, 320(23), 2417–2418.
- Vogel, L. (2017). [Viral misinformation threatens public health](#). *Canadian Medical Association Journal*, 189(50), E1567.
- Erol, Ç. (2019). ["Medical misinformation - Vet the message."](#) *Anatolian Journal of Cardiology*, 21(2), 57–59.
- Merchant, R. M., & Asch, D. A. (2018). [The value of medical science in the age of social media and "fake news."](#) *Journal of the American Medical Association*, 320(23), 2415–2416.
- Armstrong, P. W., & Naylor, C. D. (2019). [Counteracting health misinformation: A role for medical journals?](#) *Journal of the American Medical Association*, 321(19), 1863–1864.

u09a1 - Homework: Media Misinformation

Overview

For this assignment, you will identify ways to evaluate media sources so that you can counteract medical misinformation.

Instructions

To complete this assignment, do the following:

1. Read "[Counteracting Health Misinformation: A Role for Medical Journals?](#)" In the article, the author suggests ways to debunk medical myths through journals and media outlets.
2. Identify an agent (physicians, elementary or secondary schools, colleges or universities, editors, journals, or other health professionals) and decide the best way to counteract health misinformation.
3. Find one or more additional sources to support your reason for choosing this method of counteracting health misinformation.
4. Use the [Media Misinformation Source Evaluation Form](#) to evaluate the credibility of the article chosen.
5. Write a 1–2 page paper to support your decision, using the additional resource you found.
6. Write your evaluation using correct grammar, usage, spelling, without mechanical errors.
7. Submit your assignment. All assignments are due at end of the unit, unless otherwise specified.

Note: Your instructor may use the [Writing Feedback Tool](#) when grading this assignment. The Writing Feedback Tool is designed to provide you with guidance and resources to develop your writing based on five core skills. You will find writing feedback in the Scoring Guide for the assignment, once your work has been evaluated. Learn more about the Writing Feedback Tool on the course Tools and Resources page.

Additional Requirements

- **Written communication:** Written communication is free of errors that detract from the overall message.
- **Length:** 1–2 double-spaced, typed pages.
- **Font and font size:** Times New Roman, 12 point.
- **Scoring guide:** Refer to the assignment scoring guide to ensure that you meet all criteria.

Competencies Measured

By successfully completing this assignment, you will demonstrate your proficiency in the following course competencies and assessment criteria:

- Competency 3: Evaluate human biological concepts as portrayed by the media.
 - Identify an agent and decide the best way to counteract health information.
 - Locate one or more additional resources to support your reason for choosing the method(s) of counteracting health information.
 - Evaluate the credibility of the chosen article, using the provided form.
- Competency 6: Produce text with minimal grammar, usage, spelling, and mechanical errors.
 - Write your evaluation using correct grammar, usage, and spelling, without mechanical errors.

Unit 10 >> Information Overload

Introduction

Credible Medical Sources

Tanya and her husband recently went on a trip. She experienced fatigue and nausea. Because she did not have access to a doctor, she decided to use the Internet to help determine if something was wrong. Could it be a heart attack, food poisoning, the flu, age related, or just mental and physical fatigue from travel? Tanya also had been depressed with the recent news of her aunt dying. This

week, we take a closer look at credible resources to determine if Tanya needed to get further medical treatment.

Without our awareness, we are constantly preventing, detecting, and fighting health threats every day. Medical advice can come with a cost. What can we do for prevention? Maintaining your health can keep you out of the doctor's office and save you money. We will take a closer look in our final week to have more awareness about our well-being related to our nutrition, body, and environment.

To-Do List:

- **What You Need To Know:** Explore the credible biological information using the Internet.
- **Assignment:** Create a presentation in which you analyze a time when the media or Internet influenced you with either accurate or inaccurate information.

Learning Activities

u10s1 - Activity Overview

Assignment Overview

You will identify a time when the media or Internet influenced you with either accurate information or inaccurate information. Then, you will create a presentation in which you provide a critical analysis of your findings.

u10s2 - What You Need to Know

Human Body Systems Organization

Now that you have almost finished this course, review Weeks 1 through 5 where you learned about the human body systems. Review the [Human Body Systems Organization](#) infographic to re-examine the body systems and how they must work together to maintain a healthy body.

Medical Misinformation in the Media

There exists widespread medical and health-related misinformation in the news, specifically via magazines, newspapers, Internet, and social media outlets. This misinformation may be tailored around personal beliefs and bias. Read the articles below to understand the importance of your knowledge and awareness of misinformation of news being published for wide audiences.

- Chou, W. S., Oh, A., & Klein, W. M. P. (2018). [Addressing health-related misinformation on social media](#). *Journal of the American Medical Association*, 320(23), 2417–2418.
- Vogel, L. (2017). [Viral misinformation threatens public health](#). *Canadian Medical Association Journal*, 189(50), E1567.
- Erol, Ç. (2019). ["Medical misinformation - Vet the message."](#) *Anatolian Journal of Cardiology*, 21(2), 57–59.
- Merchant, R. M., & Asch, D. A. (2018). [The value of medical science in the age of social media and "fake news."](#) *Journal of the American Medical Association*, 320(23), 2415–2416.

u10a1 - Homework: Media and Internet – Accurate Versus Inaccurate

Overview

We all learn about medical information on the news and in media. At some point, we have all heard about health-related information in the media or looked up symptoms on the Internet; however, how do we know if our search is accurate? How do we know if what we hear is true?

Part One: Readings and Analysis

For this assignment, you will create a presentation in which you provide a critical analysis of a time in which you were influenced by inaccurate information, or you found accurate information through the media that helped you or someone you know. Your audience can be informal, such as a friend or family member, or formal, such as a coworker or conference presentation. Include the following:

1. Identify a time when the media or the Internet influenced you either with accurate information or inaccurate information.
2. Explain the selected topic.
 - Where did you learn about this topic? For example, did you see this in a movie, book, or other media, or did you search for information yourself on the Internet?
 - What specific symptoms or prevention methods did you identify?
3. Explain how you determined if you found either inaccurate or accurate information about the topic.

Part Two: Presentation

Create a presentation in which you provide a critical analysis of your findings. You may choose the format of your presentation. Some suggestions are:

1. A 6–12 slide PowerPoint presentation (or another choice of presentation software) with audio. Refer to the PowerPoint section of the Tools and Resources for PowerPoint tutorials.
2. A 6–12 slide presentation recorded using Kaltura, a program offered by Capella that records audio and video. Refer to [Using Kaltura](#) for more information.
3. A short podcast that includes a written transcript.

Presentation Requirements

Your presentation should meet the following requirements:

- **Length of recording:** 5–8 minutes.
- **Length of slideshow (if using):** 6–12 slides.
- **Format:** The format you choose for your presentation must be one that your instructor can access for review and grading. Do not submit files from non-standard software programs. You can reference Capella's [Computer Requirements](#) for more information about our standard software programs. Depending on the format you choose, upload or attach your presentation to the assignment area or provide a link in the submission box. Make sure to give your instructor access to the recording if necessary.

Refer to the assignment scoring guide before you submit your presentation to ensure you meet all expectations for this assignment.

Note: If you use assistive technology or any alternative communication methods to participate in this activity, please contact DisabilityServices@Capella.edu with any access-related questions or to request accommodations.

Competencies Measured

By successfully completing this assignment, you will demonstrate your proficiency in the following course competencies and assessment criteria:

- Competency 4: Evaluate human biological concepts as portrayed in the media.
 - Identify a media or Internet topic that is accurate or inaccurate.
 - Explain what was learned about the selected topic.
 - Describe the specific symptoms or prevention methods identified.
 - Explain how you determined if the topic information was accurate or inaccurate.
 - Create a presentation to demonstrate your critical analysis of the findings.
- Competency 6: Produce text with minimal grammar, usage, spelling, and mechanical errors.
 - Write coherently to support a central idea in appropriate format with correct grammar, usage, and mechanics.