DURHAM COLLEGE
SUCCESS MATTERS

# School of Health & Community Services

## Anatomy & Physiology

### 2021-22 Academic Year

| Program | Year | Semester |
|---|---|---|
| HCS-Personal Support Worker | 1 | 1 |
| HCS-Massage Therapy | 1 | 2 |

| | | | |
|---|---|---|---|
| **Course Code:** | BIOL 1503 | **Course Equiv. Code(s):** | ANAT 1340, BIOL 1501 |
| **Course Hours:** | 42 | **Course GPA Weighting:** | 3 |
| **Prerequisite:** | N/A | | |
| **Corequisite:** | N/A | | |
| **Laptop Course:** | **Yes** [ ] **No** [X] | | |
| **Delivery Mode(s):** | **In class** [ ] **Online** [ ] **Hybrid** [X] **Correspondence** [ ] | | |

| | | | | |
|---|---|---|---|---|
| **Pandemic remote teaching delivery mode** | [ ] | **Fully asynchronous** | [X] | **Combined asynchronous and synchronous** |
| **Remote proctoring required** | **Yes** [ ] | **No** [X] | | |
| **Authorized by (Dean or Director):** | Judeline Innocent | **Date:** | July 2021 | |

| **Prepared by** | | |
|---|---|---|
| **First Name** | **Last Name** | **Email** |
| Deborah | Schuh | deborah.schuh@durhamcollege.ca |

# Course Description:

This hybrid course will introduce students to the normal anatomy and physiology of the human body. The development of medical terminology will help students refine their communication skills and understanding. Organization of the body will begin with study of cells, tissues, organs and then progress to organ systems within the body. A strong emphasis will be placed on homeostasis and the cooperative relationships between body systems in maintaining an overall balance.

# Campus Closure Notice

In the event of a campus closure during which time classes cannot be conducted or attended in person, course delivery will be conducted remotely where possible. Should teaching and learning resume on campus, students may be organized into smaller groups for classroom delivery, in accordance with directions from public health authorities. In either situation, the learning plan sequence and/or evaluation methods may be adjusted to address topics requiring hands-on, practical learning activities.

# Subject Eligibility for Prior Learning Assessment & Recognition (PLAR):

Prior Learning Assessment and Recognition (PLAR) is a process a student can use to gain college credit(s) for learning and skills acquired through previous life and work experiences. Candidates who successfully meet the course learning outcomes of a specific course may be granted credit based on the successful assessment of their prior learning. The type of assessment method (s) used will be determined by subject matter experts. Grades received for the PLAR challenge will be included in the calculation of a student's grade point average.

The PLAR application process is outlined in http://www.durhamcollege.ca/plar. Full-time and part-time students must adhere to all deadline dates. Please email: PLAR@durhamcollege.ca for details.

**PLAR Eligibility**

**Yes** [X] **No** [ ]

**PLAR Assessment (if eligible):**

- [ ] Assignment
- [X] Exam
- [ ] Portfolio
- [ ] Other

# Course Learning Outcomes

Course Learning Outcomes contribute to the achievement of Program Learning Outcomes for courses that lead to a credential (e.g. diploma). A complete list of Vocational/Program Learning Outcomes and Essential Employability Skill Outcomes are located in each Program Guide.

**Course Specific Learning Outcomes (CLO)**

Student receiving a credit for this course will have reliably demonstrated their ability to:

| | |
|---|---|
| CLO1 | Utilize appropriate vocabulary when discussing the body structure and function. |
| CLO2 | Describe the levels of body organization. |
| CLO3 | Identify the principles of homeostasis. |
| CLO4 | Describe the body's basic physiological needs. |
| CLO5 | Discuss the relationship between cells, organs and body systems. |
| CLO6 | Compare the location, structure and function of the twelve body systems. |
| CLO7 | Explain how selected body functions are accomplished. |

**Essential Employability Skill Outcomes (ESSO)**

This course will contribute to the achievement of the following Essential Employability Skills:

- [X] EES 1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
- [X] EES 2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.
- [ ] EES 3. Execute mathematical operations accurately.
- [ ] EES 4. Apply a systematic approach to solve problems.
- [ ] EES 5. Use a variety of thinking skills to anticipate and solve problems.
- [X] EES 6. Locate, select, organize, and document information using appropriate technology and information systems.
- [X] EES 7. Analyze, evaluate, and apply relevant information from a variety of sources.
- [ ] EES 8. Show respect for the diverse opinions, values, belief systems, and contribution of others.
- [X] EES 9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.
- [X] EES 10. Manage the use of time and other resources to complete projects.
- [X] EES 11. Take responsibility for one's own actions, decisions, and consequences.

# Evaluation Criteria:

The Course Learning Outcomes and Essential Employability Skills Outcomes are evaluated by the following evaluation criterion.

| Evaluation Description | Course Learning Outcomes | EESOs | Weighting |
|---|---|---|---|
| Quiz: Online Concept Quizzes (11 throughout semester, top 10 will be counted) | CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | EES1, EES2, EES6, EES7, EES10, EES11 | 25 |
| Test: Test #1 (Chapters 1-4, 6, 7 in Week 5) | CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | EES1, EES2, EES6, EES10, EES11 | 15 |
| Test: Test #2 (Chapters 8-16, 18 & 19 in Week 9) | CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | EES1, EES2, EES6, EES10, EES11 | 20 |
| Test: Test #3 (Chapters 20-24, 26 & 27 in Week 14) | CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | EES1, EES2, EES6, EES10, EES11 | 20 |
| In Process: In class activities/online assignments These can occur anytime during the semester | CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | EES1, EES2, EES6, EES9, EES10, EES11 | 10 |
| Assignment: Study Note Discussion Board Assignments | CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | EES1, EES2, EES6, EES9, EES10, EES11 | 10 |
| **Total** | | | **100%** |

**Notes:**

1. Online Quizzes: there will be an online quiz administered (11 total) through DC Connect. Details regarding the quizzes are below; however, note that:

   a. Quizzes will be available for completion for a limited time (48 hours following the in-class session)
   b. Quizzes will be timed
   c. Students will be provided ONE attempt to complete quizzes for grade
   d. The top ten marks from the eleven quizzes will be counted towards the final grade
   e. There are no supplemental or re-write opportunities for quizzes. If a quiz is not completed by posted due date, a grade of 0 will be assigned to the quiz
2. Online Tests:
   a. Dates are tentative and will be confirmed by faculty at the beginning of semester and posted on DC Connect (and/or in the course Detailed Sequence of Instruction)
   b. Respondus will be used
   b. For policies regarding missed tests, students should refer to their appropriate Program Guide
   c. Tests will include a variety of types of questions: multiple choice, labelling and short answer questions
   d. There is no test"review" prior to test-all resources to prepare for tests can be found in DC Connect and from attending class
   e. It is the student's responsibility to ensure stable WiFi prior to starting tests. Student MUST notify Faculty of any concerns PRIOR or during published test time
   f. ASC-it is the student's responsibility to book tests through ASC in a timely manner

   Missed test will result in a "zero"-please refer to Program Guide for specific test polices.
3. Cue Card
   You may bring one a cue card into each test. The size of the cue card is paper, standard size, 4 inches x 6 inches (recipe card style). You may write on the both side of the cue card in handwriting only. You cannot bring any magnifying glasses or other assistive devices other than prescribed reading glasses to read the card. The card must include your name on top right and must be placed shown through Respondus at the beginning of the class so that it is visible for the invigilator to see. Students are NOT permitted to share cue cards in any manner. Student not permitted to glue or otherwise affix any paper to the card, must be handwritten. The use of

this card will be revoked if there is non compliance with the rules stated above. If these rules are broken, this will be considered academic dishonesty and all policies relating to that will be applied.

4. In-class activities can occur anytime. Students must be present/participate to obtain marks. Refer to Program Guide for policies.
5. There various assignments-please refer to DC Connect for Assignment Guidelines.

   Please refer to Program Guide for policies.
6. The midterm mark will be calculated from the mark on Test #1 plus the quiz evaluation grade derived from the top 5 grades on the online quizzes given to date as well as any in-process grades. Six quizzes will be given prior to midterm mark calculation.
7. Computer malfunctions or problems will never be accepted as an excuse for a missing course requirement. It is the student's responsibility to resolve any technical issues prior to the deadlines for submission of his/her work or evaluations. Visit the IT Service Desk Portal or call the Service Desk at 905-721-3333 should technical difficulties arise.

   See Program Guide
8. It is the learners responsibility to be aware of program specific policies and expectations regarding evaluations and student conduct. Refer to Program Guide.

# Required Text(s) and Supplies:

1. PSW Program
   Durham PSW e-only F2021
   ISBN: 9780323974493
   THIS is required for PSW Students Only

   Massage Therapy & Dental Assisting Programs: DO NOT purchase above PSW Bundle 9780323825962 - Herlihy Study Guide for The Human Body in Health and Illness - Elsevier eBook on VitalSource

   9780323811248 Herlihy The Human Body in Health and Illness - Elsevier eBook on VitalSource

2. Technology Requirements
   The following is a list of general technologies and skills that are required and will be used throughout the PSW Program
   Technology Requirements
   - Laptop or desktop computer
   - Stable Internet access
   - Internet browser (Google Chrome opens in new window, Mozilla Firefox opens in new window, Microsoft Edge opens in new window, or Safari opens in new window)
   - Word Processing software (Microsoft Word opens in new windowor Google Docs opens in new window)
   - Speakers
   - Headphones
   - Web Cam

   Technical Skills
   The following technical skills are required and will be used throughout the PSW Program
   - Use the learning management system "DC Connect" (D2L/Brigtspace)
   - Use of email with attachments
   - Create and submit files in commonly used word processing formats

# Recommended Resources (purchase is optional):

N/A

# Policies and Expectations for the Learning Environment:

**General Policies and Expectations:**

| General College policies related to | General policies related to |
|---|---|
| + Acceptable Use of Information Technology<br>+ Academic Policies<br>+ Academic Honesty<br>+ Student Code of Conduct<br>+ Students' Rights and Responsibilities can be found on-line at http://www.durhamcollege.ca/academicpolicies | + attendance<br>+ absence related to tests or assignment due dates<br>+ excused absences<br>+ writing tests and assignments<br>+ classroom management can be found in the Program Guide (full time programs only) in MyCampus http://www.durhamcollege.ca/mycampus/ |

**Course Specific Policies and Expectations:**

See Program Guide for all policies.

Asynchronous Online:
This is an online course-the majority of learning is self-study modules completed independently through DC Connect. Each unit includes detailed narrated ppt, videos and learning activities.

Hybrid Model-the one-hr "synchronous" virtual class is intended to provide opportunities for students to complete connection activities, collaborate with Professor and peers and clarify concepts.

Attendance:
As indicated this course is a hybrid course design. Students will complete videos, notes, and worksheets through independent learning completed outside of class time (minimum 2 hours per week). It is highly recommended that students come to the virtual class having completed asynchronous leaning and be prepared to discuss questions about the content from themselves and their peers.

Additionally, communication is made with students regarding class announcements and grades via DC Connect.

Computer Issues
1. If the College computers are "down or not working" resulting in the inability to meet a required deadline, the student must obtain written, dated documentation of the problem from the Commons IT Support Help Desk, to give to the Faculty. This must be done within 24 hours of the deadline. If the student is not receiving email through DC Mail, it is the student's responsibility to following up with IT Services promptly.

2. For IT Support visit https://durhamcollege.ca/info-for/current-students/information-technology-services-its

3. The Faculty is not responsible for any computer problems the student may encounter sending the assignment electronically. It is the student's responsibility to contact IT regarding any computer issues.

4. It is the student's responsibility to ensure the correct and most recent assignment file is uploaded to the "Assignment" folder in DC Connect. It is also the student's responsibility to ensure file is actually uploaded.

Tests may be scheduled OUTSIDE of class time at discretion of Faculty and availability of space. Students registered with the Access and Support Center will refer to their policies regarding quiz/test scheduling.

Academic Assistance:
Additional help is available from the professor via appointment. Students requiring assistance throughout the course may wish to investigate the services offered by:

Student Academic Learning Services (SALS):
Including peer tutoring, subject-specific assistance, learning/study skills and writing support.

Student Services Building, SSB 204T
http://www.durhamcollege.ca/student-experience/helping-you-succeed/student-academic-learning-services-sals

The Access and Support Centre (ASC): Services for students with exceptionalities.
South Wing - SW116
http://www.durhamcollege.ca/student-experience/helping-you-succeed/access-and-support-centre

# General Course Outline Notes:

1. Students should use the course outline as a learning tool to guide their achievement of the learning outcomes for this course. Specific questions should be directed to their individual professor.
2. The college considers the electronic communication methods (i.e. DC Mail or DC Connect) as the primary channel of communication. Students should check the sources regularly for current course information.
3. Professors are responsible for following this outline and facilitating the learning as detailed in this outline.
4. Course outlines should be retained for future needs (i.e. university credits, transfer of credits etc.)
5. A full description of the Academic Appeals Process can be found at https://durhamcollege.ca/about/governance/policies/academic-policies .
6. Faculty are committed to ensuring accessible learning for all students. Students who would like assistance with academic access and accommodations in accordance with the Ontario Human Rights Code should register with the Access and Support Centre (ASC). ASC is located in room SW116, Oshawa Campus and in room 180 at the Whitby Campus. Contact ASC at 905-721-3123 for more information.
7. Durham College is committed to the fundamental values of preserving academic integrity. Durham College and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments could be subject to submission either by themselves or by the faculty member for a review of textual similarity to Turnitin.com. Further information about Turnitin can be found on the Turnitin.com Web site.

# Learning Plan

The Learning Plan is a planning guideline. Actual delivery of content may vary with circumstances.

Students will be notified in writing of changes that involve the addition or deletion of learning outcomes or evaluations, prior to changes being implemented, as specified in the Course Outline Policy and Procedure at Durham College.

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 1 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** EES1, EES2, EES6, EES10, EES11 **Practiced:** EES1 |
| | **Intended Learning Objectives**<br>INTRODUCTION TO ANATOMY & PHYSIOLOGY<br><br>Describe the focus and rational of Anatomy & Physiology.<br>Explain how Anatomy & Physiology is evaluated.<br>Explain how to access Anatomy & Physiology learning resources.<br>Describe course specific policies and expectations for the learning environment.<br>Explain the structure of and success strategies for a hybrid course.<br><br>UNIT 1 - INTRODUCTION TO THE HUMAN BODY<br><br>1. Distinguish between anatomy and physiology and explain how they are related.<br>2. Define the term pathology.<br>3. Describe the characteristics of life.<br>4. Define metabolism and explain its significance.<br>5. Differentiate between anabolism and catabolism.<br>6. Discuss the basic physiological needs.<br>7. Discuss the concept of homeostasis, and explain its importance to survival.<br>8. Discuss the importance of feedback. mechanisms, and differentiate between negative and positive feedback.<br>9. Describe the levels of organization within the human body.<br>10. List the eleven body systems and give the general function of each.<br>11. Describe the anatomical position.<br>12. Describe the standard planes of reference in the human body.<br>13. Define the common anatomical terms of direction.<br>14. Name and locate the principal body cavities of the body.<br>15. Name and locate the regions and quadrants of the abdomen.<br>16. Use regional terms to describe areas of the body. |
| | **Intended Learning Activities**<br>Review of Course Outline and Sequence of Instruction.<br>Discussion and development of class learning environment.<br>Discussion of hybrid course structure and success strategies.<br><br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Course Outline<br>DC Connect<br><br>Text: Chapter 1<br>Study Guide: Chapter 1 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 1 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>INTRODUCTION TO ANATOMY & PHYSIOLOGY<br><br>Describe the focus and rational of Anatomy & Physiology.<br>Explain how Anatomy & Physiology is evaluated.<br>Explain how to access Anatomy & Physiology learning resources.<br>Describe course specific policies and expectations for the learning environment.<br>Explain the structure of and success strategies for a hybrid course.<br><br>UNIT 1 - INTRODUCTION TO THE HUMAN BODY<br><br>1. Distinguish between anatomy and physiology and explain how they are related.<br>2. Define the term pathology.<br>3. Describe the characteristics of life.<br>4. Define metabolism and explain its significance.<br>5. Differentiate between anabolism and catabolism.<br>6. Discuss the basic physiological needs.<br>7. Discuss the concept of homeostasis, and explain its importance to survival.<br>8. Discuss the importance of feedback mechanisms, and differentiate between negative and positive feedback.<br>9. Describe the levels of organization within the human body.<br>10. List the eleven body systems and give the general function of each.<br>11. Describe the anatomical position.<br>12. Describe the standard planes of reference in the human body.<br>13. Define the common anatomical terms of direction.<br>14. Name and locate the principal body cavities of the body.<br>15. Name and locate the regions and quadrants of the abdomen.<br>16. Use regional terms to describe areas of the body. |
| | **Intended Learning Activities**<br>Review of Course Outline and Sequence of Instruction.<br>Discussion and development of class learning environment.<br>Discussion of hybrid course structure and success strategies<br><br>Group Discussion/Work |
| | **Resources and References**<br>Course Outline<br>DC Connect<br><br>Text: Chapter 1<br>Study Guide: Chapter 1 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 2 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 2 - CHEMISTRY, MATTER AND LIFE<br>1. Describe the structure of an atom.<br>2. Differentiate between ionic and covalent bonds.<br>3. Differentiate between compounds and molecules.<br>4. Discuss water and solutions.<br>5. Describe ions in relation to electrolytes.<br>6. Define pH scale.<br>7. Describe the importance of buffers in homeostasis.<br>8. Name the four main types of organic compounds and the building blocks of each.<br>9. Define enzyme; describe how enzymes work.<br>UNIT 3 - THE CELL<br>1. Explain why the cell is considered the basic unit of life.<br>2. Describe the function and composition of the plasma membrane.<br>3. Differentiate between extracellular and intracellular fluids.<br>4. Describe the cytoplasm of the cell, including the names and functions of the main organelles.<br>5. Briefly explain the role of ATP in the body.<br>6. Differentiate between aerobic and anaerobic cellular metabolism.<br>7. Describe methods by which substances enter and leave cells.<br>8. Describe the composition, location, and function of DNA in the cell.<br>9. Describe the processes of transcription and translation.<br>10. Briefly distinguish between mitosis and meiosis.<br>11. Explain the significance of cell division.<br>12. Discuss the concept of cell differentiation. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 2 & 4<br>Study Guide: Chapter 2 & 4<br>Text: Chapter 3<br>Study Guide: Chapter 3 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 2 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 2 - CHEMISTRY, MATTER AND LIFE<br>1. Describe the structure of an atom.<br>2. Differentiate between ionic and covalent bonds.<br>3. Differentiate between compounds and molecules.<br>4. Discuss water and solutions.<br>5. Describe ions in relation to electrolytes.<br>6. Define pH scale.<br>7. Describe the importance of buffers in homeostasis.<br>8. Name the four main types of organic compounds and the building blocks of each.<br>9. Define enzyme; describe how enzymes work.<br>UNIT 3 - THE CELL<br>1. Explain why the cell is considered the basic unit of life.<br>2. Describe the function and composition of the plasma membrane.<br>3. Differentiate between extracellular and intracellular fluids.<br>4. Describe the cytoplasm of the cell, including the names and functions of the main organelles.<br>5. Briefly explain the role of ATP in the body.<br>6. Differentiate between aerobic and anaerobic cellular metabolism.<br>7. Describe methods by which substances enter and leave cells.<br>8. Describe the composition, location, and function of DNA in the cell.<br>9. Describe the processes of transcription and translation.<br>10. Briefly distinguish between mitosis and meiosis.<br>11. Explain the significance of cell division.<br>12. Discuss the concept of cell differentiation. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 2 & 4<br>Study Guide: Chapter 2 & 4<br>Text: Chapter 3<br>Study Guide: Chapter 3 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 3 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 4 - TISSUES<br>1. Name the four types of tissues and their general characteristics.<br>2. Describe the location and function of epithelial tissue.<br>3. Describe the function of mucus and cilia.<br>4. Differentiate between exocrine and endocrine glands.<br>5. Identify the structure, location, and function of connective tissue matrix.<br>6. Discuss the main types of connective tissue.<br>7. Give examples of liquid, soft, fibrous and hard connective tissue.<br>8. Identify the three types of muscle tissue.<br>9. Distinguish between voluntary and involuntary muscle, and relate to the three types of muscle tissue.<br>10. Describe the function of the neuron and neuroglia.<br>11. Describe membranes and their function.<br>12. Define the three types of epithelial membranes.<br>13. Discuss the function of serous membranes including the pericardium, pleura, and peritoneum.<br><br>UNIT 5 - THE INTEGUMENTARY SYSTEM<br>1. Name and describe the layers of the skin.<br>2. Explain the process and function of keratinization.<br>3. Describe the subcutaneous layer.<br>4. Explain the function of melanin and discuss other factors that affect skin colour.<br>5. Discuss the structure and function of the hair and nails.<br>6. Describe the functions of the sebaceous and sudoriferous (apocrine and eccrine) glands.<br>7. Discuss the information gained by observation of the skin.<br>8. Discuss the role of the skin in thermoregulation. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 6<br>Study Guide: Chapter 6<br><br>Text: Chapter 7<br>Study Guide: Chapter 7 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 3 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 4 - TISSUES<br>1. Name the four types of tissues and their general characteristics.<br>2. Describe the location and function of epithelial tissue.<br>3. Describe the function of mucus and cilia.<br>4. Differentiate between exocrine and endocrine glands.<br>5. Identify the structure, location, and function of connective tissue matrix.<br>6. Discuss the main types of connective tissue.<br>7. Give examples of liquid, soft, fibrous and hard connective tissue.<br>8. Identify the three types of muscle tissue.<br>9. Distinguish between voluntary and involuntary muscle, and relate to the three types of muscle tissue.<br>10. Describe the function of the neuron and neuroglia.<br>11. Describe membranes and their function.<br>12. Define the three types of epithelial membranes.<br>13. Discuss the function of serous membranes including the pericardium, pleura, and peritoneum.<br><br>UNIT 5 - THE INTEGUMENTARY SYSTEM<br>1. Name and describe the layers of the skin.<br>2. Explain the process and function of keratinization.<br>3. Describe the subcutaneous layer.<br>4. Explain the function of melanin and discuss other factors that affect skin colour.<br>5. Discuss the structure and function of the hair and nails.<br>6. Describe the functions of the sebaceous and sudoriferous (apocrine and eccrine) glands.<br>7. Discuss the information gained by observation of the skin.<br>8. Discuss the role of the skin in thermoregulation. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 6<br>Study Guide: Chapter 6<br><br>Text: Chapter 7<br>Study Guide: Chapter 7 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 4 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 6 - THE SKELETAL SYSTEM<br><br>1. Describe the functions of the skeleton.<br>2. Distinguish between the axial and appendicular skeleton.<br>3. Describe the various shapes of bones.<br>4. Describe the structure of a long bone.<br>5. Differentiate between compact and cancellous bone.<br>6. Differentiate between red and yellow marrow with respect to function and location.<br>7. Differentiate between intramembranous and endochondral ossification.<br>8. Discuss the hormonal control of blood calcium levels.<br>9. Locate and briefly describe the function of the following bones in the axial skeleton:<br>a. Skull - cranial, facial bones, and sinuses<br>b. Ribs - true, false, and floating<br>c. Sternum - manubrium, body and xyphoid process<br>d. Spine - cervical, thoracic, lumbar, sacrum, coccyx<br>e. Pelvis - ilium, pubis, ischium, acetabulum<br>10. Locate and briefly describe the function of the following bones in the appendicular skeleton:<br>a. Scapula<br>b. Clavicle<br>c. Upper extremity-humerus, ulna, radius, carpals, metacarpals, phalanges<br>d. Lower extremity-femur, patella, tibia, fibula, tarsals, metatarsals, phalanges<br>11. Define a joint.<br>12. Describe the three types of joints.<br>13. Describe the structure and function of a synovial joint.<br>14. Describe the types of movement produced by synovial joints. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 8<br>Study Guide: Chapter 8 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 4 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 6 - THE SKELETAL SYSTEM<br><br>1. Describe the functions of the skeleton.<br>2. Distinguish between the axial and appendicular skeleton.<br>3. Describe the various shapes of bones.<br>4. Describe the structure of a long bone.<br>5. Differentiate between compact and cancellous bone.<br>6. Differentiate between red and yellow marrow with respect to function and location.<br>7. Differentiate between intramembranous and endochondral ossification.<br>8. Discuss the hormonal control of blood calcium levels.<br>9. Locate and briefly describe the function of the following bones in the axial skeleton:<br>a. Skull - cranial, facial bones, and sinuses<br>b. Ribs - true, false, and floating<br>c. Sternum - manubrium, body and xyphoid process<br>d. Spine - cervical, thoracic, lumbar, sacrum, coccyx<br>e. Pelvis - ilium, pubis, ischium, acetabulum<br>10. Locate and briefly describe the function of the following bones in the appendicular skeleton:<br>a. Scapula<br>b. Clavicle<br>c. Upper extremity-humerus, ulna, radius, carpals, metacarpals, phalanges<br>d. Lower extremity-femur, patella, tibia, fibula, tarsals, metatarsals, phalanges<br>11. Define a joint.<br>12. Describe the three types of joints.<br>13. Describe the structure and function of a synovial joint.<br>14. Describe the types of movement produced by synovial joints. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>N/A |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 5 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 7 - THE MUSCULAR SYSTEM<br><br>1. Compare the three types of muscle tissue.<br>2. Describe the anatomy and major functions of skeletal muscle.<br>3. Describe tendons including the origin and insertion.<br>4. Define prime mover, antagonist, and synergist.<br>5. Briefly describe skeletal muscle contraction.<br>6. Describe the energy sources required for muscle contraction.<br>7. Explain the effects of exercise on muscles and the overall body.<br>8. Describe some of the major muscles of the:<br>a. Head - temporalis, frontalis, zygomaticus, and masseter<br>b. Neck - sternocleidomastoid and trapezius<br>c. Trunk - pectoralis major, abdominal muscles (rectus abdominis, internal/external oblique, and transverse abdominis), latissimus dorsi<br>d. Shoulder girdle and arm - deltoid, biceps brachii, triceps brachii, and brachioradialis<br>e. Pelvis and leg - quadriceps femoris (rectus femoris, vastus lateralis, vastus medialis, and vastus intermedius), hamstring group (biceps femoris, semitendinosus, and semimembranosis, and gastrocnemius |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 9<br>Study Guide: Chapter 9 |
| | **Evaluation**<br>Test: Test #1<br>(Chapters 1-4, 6, 7 in Week 5)<br>Assignment: Assignment |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 5 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 7 - THE MUSCULAR SYSTEM<br><br>1. Compare the three types of muscle tissue.<br>2. Describe the anatomy and major functions of skeletal muscle.<br>3. Describe tendons including the origin and insertion.<br>4. Define prime mover, antagonist, and synergist.<br>5. Briefly describe skeletal muscle contraction.<br>6. Describe the energy sources required for muscle contraction.<br>7. Explain the effects of exercise on muscles and the overall body.<br>8. Describe some of the major muscles of the:<br>a. Head - temporalis, frontalis, zygomaticus, and masseter<br>b. Neck - sternocleidomastoid and trapezius<br>c. Trunk - pectoralis major, abdominal muscles (rectus abdominis, internal/external oblique, and transverse abdominis), latissimus dorsi<br>d. Shoulder girdle and arm - deltoid, biceps brachii, triceps brachii, and brachioradialis<br>e. Pelvis and leg - quadriceps femoris (rectus femoris, vastus lateralis, vastus medialis, and vastus intermedius), hamstring group (biceps femoris, semitendinosus, and semimembranosis, and gastrocnemius |
| | **Intended Learning Activities**<br>Test #1 (Units 1 - 6) |
| | **Resources and References**<br>Text: Chapter 9<br>Study Guide: Chapter 9 |
| | **Evaluation** **Weighting**<br>Test: Test #1 20%<br>(Chapters 1-4, 6, 7 in Week 5)<br>Assignment: Assignment |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 6 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 8 - THE NERVOUS SYSTEM<br>1. Identify the main function of the nervous system.<br>2. Name the groups of cells which make up nervous tissue and identify their functions.<br>3. Describe the steps in an action potential.<br>4. Explain the role of myelin in nerve conduction.<br>5. Briefly describe transmission at a synapse.<br>6. Explain the steps in a reflex arc.<br>7. Differentiate between the CNS and PNS.<br>8. Differentiate between the somatic and autonomic nervous systems.<br>9. Explain the division and function of the autonomic nervous system.<br>10. Give the location and functions of the four main divisions of the brain.<br>11. Explain the functions of the hypothalamus and medulla oblongata.<br>12. Describe the structure and function of the spinal cord.<br>13. Name and describe the three meninges.<br>14. Describe the function and location of cerebrospinal fluid.<br>15. Compare the cranial and spinal nerves.<br><br>UNIT 9 - THE SENSORY SYSTEM<br>1. Describe the function of the sensory system.<br>2. Differentiate between the special and general senses and give examples of each.<br>3. List and describe the main structures of the eye.<br>4. Compare the extrinsic and intrinsic muscles of the eye.<br>5. Define refraction and list the refractive parts of the eye.<br>6. Differentiate between the rods and cones of the eye.<br>7. Explain the process of convergence.<br>8. Describe the three divisions of the ear.<br>9. List the steps in hearing.<br>10. Compare static and dynamic equilibrium.<br>11. Discuss taste including the five main tastes.<br>12. Outline the process of smell.<br>13. Discuss the sense of pain, touch, pressure, temperature and position.<br>14. Explain pain including the concept of referred pain.<br>15. Explain sensory projection and adaption. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 10, 11, & 12<br>Study Guide: Chapter 10, 11, & 12<br><br>Text: Chapter 13<br>Study Guide: Chapter 13 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 6 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 8 - THE NERVOUS SYSTEM<br>1. Identify the main function of the nervous system.<br>2. Name the groups of cells which make up nervous tissue and identify their functions.<br>3. Describe the steps in an action potential.<br>4. Explain the role of myelin in nerve conduction.<br>5. Briefly describe transmission at a synapse.<br>6. Explain the steps in a reflex arc.<br>7. Differentiate between the CNS and PNS.<br>8. Differentiate between the somatic and autonomic nervous systems.<br>9. Explain the division and function of the autonomic nervous system.<br>10. Give the location and functions of the four main divisions of the brain.<br>11. Explain the functions of the hypothalamus and medulla oblongata.<br>12. Describe the structure and function of the spinal cord.<br>13. Name and describe the three meninges.<br>14. Describe the function and location of cerebrospinal fluid.<br>15. Compare the cranial and spinal nerves.<br><br>UNIT 9 - THE SENSORY SYSTEM<br>1. Describe the function of the sensory system.<br>2. Differentiate between the special and general senses and give examples of each.<br>3. List and describe the main structures of the eye.<br>4. Compare the extrinsic and intrinsic muscles of the eye.<br>5. Define refraction and list the refractive parts of the eye.<br>6. Differentiate between the rods and cones of the eye.<br>7. Explain the process of convergence.<br>8. Describe the three divisions of the ear.<br>9. List the steps in hearing.<br>10. Compare static and dynamic equilibrium.<br>11. Discuss taste including the five main tastes.<br>12. Outline the process of smell.<br>13. Discuss the sense of pain, touch, pressure, temperature and position.<br>14. Explain pain including the concept of referred pain.<br>15. Explain sensory projection and adaption. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 10, 11, & 12<br>Study Guide: Chapter 10, 11, & 12<br><br>Text: Chapter 13<br>Study Guide: Chapter 13 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 7 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 10 - THE ENDOCRINE SYSTEM<br>1. Compare the effects of the nervous system and the endocrine system in controlling the body.<br>2. Describe the functions of hormones.<br>3. Examine the concept of stimulus, target tissue and response.<br>4. Explain how hormones are regulated.<br>5. Name and locate the major endocrine glands.<br>6. List and describe the effects of the major hormones produced by the endocrine glands.<br>7. Describe how the hypothalamus controls the anterior and posterior pituitary gland.<br>8. Explain how the endocrine system responds to stress.<br>UNIT 11 - THE BLOOD<br>1. Describe the general characteristics of blood.<br>2. List the components of blood.<br>3. List the functions of blood.<br>4. Name and describe the three types of formed elements in the blood and their functions.<br>5. Define hemostasis and describe the three steps involved.<br>6. Compare ABO and Rh blood types.<br>7. Explain the relationship between blood type and blood transfusions. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 14<br>Study Guide: Chapter 14<br>Text: Chapter 15<br>Study Guide: Chapter 15 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 7 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 10 - THE ENDOCRINE SYSTEM<br>1. Compare the effects of the nervous system and the endocrine system in controlling the body.<br>2. Describe the functions of hormones.<br>3. Examine the concept of stimulus, target tissue and response.<br>4. Explain how hormones are regulated.<br>5. Name and locate the major endocrine glands.<br>6. List and describe the effects of the major hormones produced by the endocrine glands.<br>7. Describe how the hypothalamus controls the anterior and posterior pituitary gland.<br>8. Explain how the endocrine system responds to stress.<br>UNIT 11 - THE BLOOD<br>1. Describe the general characteristics of blood.<br>2. List the components of blood.<br>3. List the functions of blood.<br>4. Name and describe the three types of formed elements in the blood and their functions.<br>5. Define hemostasis and describe the three steps involved.<br>6. Compare ABO and Rh blood types.<br>7. Explain the relationship between blood type and blood transfusions. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 14<br>Study Guide: Chapter 14<br>Text: Chapter 15<br>Study Guide: Chapter 15 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 8 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 12 - THE HEART AND CARDIOVASCULAR SYSTEM<br>1. Describe the location of the heart.<br>2. Describe the three layers of heart wall.<br>3. Describe the structure of the pericardium and cite its functions.<br>4. Compare the functions of the right and left sides of the heart.<br>5. Compare the pulmonary and systemic circuits relative to location and function.<br>6. Name the four chambers of the heart and compare their function.<br>7. Name the valves of the heart and explain their function.<br>8. Describe the blood supply to the myocardium.<br>9. Explain the cardiac cycle including systole and diastole.<br>10. Describe the conduction system of the heart.<br>11. Explain the effects of the autonomic nervous system on the heart.<br>12. Differentiate among the five types of blood vessels with regard to structure and function.<br>13. Discuss capillary exchange.<br>14. Define vasoconstriction and vasodilation.<br>15. Explain the factors involved in blood return to the heart.<br>16. Define the pulse and list factors that affect heart rate.<br>17. Define blood pressure and list factors that affect blood pressure. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 16, 17, 18, & 19<br>Study Guide: Chapter 16, 17, 18, & 19 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 8 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 12 - THE HEART AND CARDIOVASCULAR SYSTEM<br>1. Describe the location of the heart.<br>2. Describe the three layers of heart wall.<br>3. Describe the structure of the pericardium and cite its functions.<br>4. Compare the functions of the right and left sides of the heart.<br>5. Compare the pulmonary and systemic circuits relative to location and function.<br>6. Name the four chambers of the heart and compare their function.<br>7. Name the valves of the heart and explain their function.<br>8. Describe the blood supply to the myocardium.<br>9. Explain the cardiac cycle including systole and diastole.<br>10. Describe the conduction system of the heart.<br>11. Explain the effects of the autonomic nervous system on the heart.<br>12. Differentiate among the five types of blood vessels with regard to structure and function.<br>13. Discuss capillary exchange.<br>14. Define vasoconstriction and vasodilation.<br>15. Explain the factors involved in blood return to the heart.<br>16. Define the pulse and list factors that affect heart rate.<br>17. Define blood pressure and list factors that affect blood pressure. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 16, 17, 18, & 19<br>Study Guide: Chapter 16, 17, 18, & 19 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 9 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 13 - THE LYMPHATIC AND IMMUNE SYSTEM<br>1. List the functions of the lymphatic system.<br>2. Compare and contrast lymphatic and cardiovascular circulation.<br>3. Describe lymphatic capillaries.<br>4. Name the two main lymphatic ducts and describe the area drained by each.<br>5. Discuss the structure and function of lymph nodes.<br>6. List the functions of the spleen.<br>7. Explain the role of the thymus in the immune system.<br>8. Describe the location and function of the tonsils.<br>9. Differentiate between nonspecific and specific body defenses and give examples of each.<br>10. Differentiate between naturally and artificially acquired immunity.<br>11. Differentiate between active and passive immunity.<br>12. Describe the inflammatory reaction.<br>13. Explain the role of fever in the body's response to infection.<br>14. Compare the function of T cells and B cells.<br>15. Explain the antigen-antibody reaction.<br>16. Describe vaccines and their role in immunity. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 20 & 21<br>Study Guide: Chapter 20 & 21 |
| | **Evaluation**<br>Test: Test #2 (Chapters 8-16, 18 & 19 in Week 9)<br>Assignment: Assignment |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 9 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 13 - THE LYMPHATIC AND IMMUNE SYSTEM<br>1. List the functions of the lymphatic system.<br>2. Compare and contrast lymphatic and cardiovascular circulation.<br>3. Describe lymphatic capillaries.<br>4. Name the two main lymphatic ducts and describe the area drained by each.<br>5. Discuss the structure and function of lymph nodes.<br>6. List the functions of the spleen.<br>7. Explain the role of the thymus in the immune system.<br>8. Describe the location and function of the tonsils.<br>9. Differentiate between nonspecific and specific body defenses and give examples of each.<br>10. Differentiate between naturally and artificially acquired immunity.<br>11. Differentiate between active and passive immunity.<br>12. Describe the inflammatory reaction.<br>13. Explain the role of fever in the body's response to infection.<br>14. Compare the function of T cells and B cells.<br>15. Explain the antigen-antibody reaction.<br>16. Describe vaccines and their role in immunity. |
| | **Intended Learning Activities**<br>Test # 2 (Units 7 - 12) |
| | **Resources and References**<br>Text: Chapter 20 & 21<br>Study Guide: Chapter 20 & 21 |
| | **Evaluation** **Weighting**<br>Test: Test #2 (Chapters 8-16, 18 & 19 in Week 9) 20%<br>Assignment: Assignment |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 10 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 14 - THE RESPIRATORY SYSTEM<br><br>1. Describe the location, structure and function of the:<br>a. nasal cavities<br>b. pharynx<br>c. larynx<br>d. trachea<br>e. bronchi and bronchioles<br>f. alveoli<br>2. Define respiration and describe the three phases of respiration.<br>3. Define inhalation and exhalation.<br>4. Explain the process of gas exchange.<br>5. List the ways oxygen and carbon dioxide are transported in the blood.<br>6. Describe how breathing is regulated. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 22<br>Study Guide: Chapter 22 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 10 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 14 - THE RESPIRATORY SYSTEM<br><br>1. Describe the location, structure and function of the:<br>a. nasal cavities<br>b. pharynx<br>c. larynx<br>d. trachea<br>e. bronchi and bronchioles<br>f. alveoli<br>2. Define respiration and describe the three phases of respiration.<br>3. Define inhalation and exhalation.<br>4. Explain the process of gas exchange.<br>5. List the ways oxygen and carbon dioxide are transported in the blood.<br>6. Describe how breathing is regulated. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 22<br>Study Guide: Chapter 22 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 11 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 15 - THE DIGESTIVE SYSTEM<br><br>1. Describe the main functions of the digestive system.<br>2. Differentiate between the digestive tract and accessory organs.<br>3. Describe the structure and function of the:<br>a. mouth<br>b. teeth<br>c. larynx<br>d. esophagus<br>e. stomach including the sphincters<br>4. Explain the process of swallowing.<br>5. Define peristalsis and its role in digestion.<br>6. Define chime.<br>7. Differentiate between the duodenum, jejunum and ileum.<br>8. Explain the role of the small intestine in digestion including the villi.<br>9. List the subdivisions of the large intestine.<br>10. Explain the functions of the large intestine.<br>11. Explain the functions of the salivary glands.<br>12. Discuss the functions of the liver.<br>13. Describe the function of bile in digestion.<br>14. Explain the function of the gall bladder.<br>15. Describe the role of the pancreas in digestion.<br>16. Discuss the digestive process including absorption.<br>17. Discuss the control of digestion. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 23<br>Study Guide: Chapter 23 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 11 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 15 - THE DIGESTIVE SYSTEM<br><br>1. Describe the main functions of the digestive system.<br>2. Differentiate between the digestive tract and accessory organs.<br>3. Describe the structure and function of the:<br>a. mouth<br>b. teeth<br>c. larynx<br>d. esophagus<br>e. stomach including the sphincters<br>4. Explain the process of swallowing.<br>5. Define peristalsis and its role in digestion.<br>6. Define chime.<br>7. Differentiate between the duodenum, jejunum and ileum.<br>8. Explain the role of the small intestine in digestion including the villi.<br>9. List the subdivisions of the large intestine.<br>10. Explain the functions of the large intestine.<br>11. Explain the functions of the salivary glands.<br>12. Discuss the functions of the liver.<br>13. Describe the function of bile in digestion.<br>14. Explain the function of the gall bladder.<br>15. Describe the role of the pancreas in digestion.<br>16. Discuss the digestive process including absorption.<br>17. Discuss the control of digestion. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 23<br>Study Guide: Chapter 23 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 12 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 16 - THE URINARY SYSTEM AND BODY FLUIDS<br><br>1. List the systems that eliminate waste and name the substances eliminated by each.<br>2. Explain the main functions of the urinary system.<br>3. Identify the parts of the urinary system.<br>a. Kidney<br>i. Renal cortex<br>ii. Renal Medulla<br>iii. Renal Pelvis<br>b. Ureter<br>c. Bladder<br>d. Urethra<br>4. Describe the functions the parts of the urinary system.<br>5. Explain the role of the nephron in the kidney.<br>6. Name the processes involved in urine formation and describe the action of each.<br>7. Name the normal and abnormal constituents of urine.<br>8. Explain the process of urination.<br>9. Discuss the importance of water to the body.<br>10. Explain water balance.<br>11. Explain the sense of thirst. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 24<br>Study Guide: Chapter 24 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 12 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 16 - THE URINARY SYSTEM AND BODY FLUIDS<br><br>1. List the systems that eliminate waste and name the substances eliminated by each.<br>2. Explain the main functions of the urinary system.<br>3. Identify the parts of the urinary system.<br>a. Kidney<br>i. Renal cortex<br>ii. Renal Medulla<br>iii. Renal Pelvis<br>b. Ureter<br>c. Bladder<br>d. Urethra<br>4. Describe the functions the parts of the urinary system.<br>5. Explain the role of the nephron in the kidney.<br>6. Name the processes involved in urine formation and describe the action of each.<br>7. Name the normal and abnormal constituents of urine.<br>8. Explain the process of urination.<br>9. Discuss the importance of water to the body.<br>10. Explain water balance.<br>11. Explain the sense of thirst. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 24<br>Study Guide: Chapter 24 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online |
|---|---|
| 13 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 17 - THE REPRODUCTIVE SYSTEM<br><br>1. Define meiosis.<br>2. Explain the difference between dominate and recessive genes.<br>3. Discuss the chromosomes involved in sex determination.<br>4. Identify the organs and accessory organs of the male reproductive systems.<br>a. Testes<br>b. Vas deferens<br>c. Ejaculatory duct<br>d. Seminal vesicle<br>e. Prostate gland<br>f. Urethra<br>g. Penis<br>5. Describe the structure and function of the testes.<br>6. Explain the function of testosterone.<br>7. Describe the formation and function of semen.<br>8. Identify the organs and accessory organs of the female reproductive systems.<br>a. Ovary<br>b. Fimbriae<br>c. Infundibulum<br>d. Fallopian tube<br>e. Uterus<br>f. Cervix<br>g. Vagina<br>9. Explain the process of ovulation.<br>10. Describe fertilization and the early development of the zygote.<br>11. Discuss the development of embryo and fetus.<br>12. Briefly describe the four stages of labour. |
| | **Intended Learning Activities**<br>Video Lectures/Course Notes<br>Textbook Reading<br>Study Guide Completion |
| | **Resources and References**<br>Text: Chapter 26 & 27<br>Study Guide: Chapter 26 & 27 |
| | **Evaluation** **Weighting**<br>Quiz: Online Concept Quizzes 2.5%<br>(11 throughout semester, top 10 will be counted) |

| Wk. | Hours: 1 Delivery: In Class |
|---|---|
| 13 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES9, EES10, EES11 |
| | **Intended Learning Objectives**<br>UNIT 17 - THE REPRODUCTIVE SYSTEM<br><br>1. Define meiosis.<br>2. Explain the difference between dominate and recessive genes.<br>3. Discuss the chromosomes involved in sex determination.<br>4. Identify the organs and accessory organs of the male reproductive systems.<br>a. Testes<br>b. Vas deferens<br>c. Ejaculatory duct<br>d. Seminal vesicle<br>e. Prostate gland<br>f. Urethra<br>g. Penis<br>5. Describe the structure and function of the testes.<br>6. Explain the function of testosterone.<br>7. Describe the formation and function of semen.<br>8. Identify the organs and accessory organs of the female reproductive systems.<br>a. Ovary<br>b. Fimbriae<br>c. Infundibulum<br>d. Fallopian tube<br>e. Uterus<br>f. Cervix<br>g. Vagina<br>9. Explain the process of ovulation.<br>10. Describe fertilization and the early development of the zygote.<br>11. Discuss the development of embryo and fetus.<br>12. Briefly describe the four stages of labour. |
| | **Intended Learning Activities**<br>Group Discussion/Work |
| | **Resources and References**<br>Text: Chapter 26 & 27<br>Study Guide: Chapter 26 & 27 |
| | **Evaluation**<br>In Process: In-process<br>(in class activities/online assignments)<br>These can occur anytime during the semester |

| Wk. | Hours: 2 Delivery: Online | |
|---|---|---|
| 14 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 | |
| | **Intended Learning Objectives**<br>Review for Test # 3 (Units 13 - 17) | |
| | **Intended Learning Activities**<br>Review for Test # 3 (Units 13 - 17) | |
| | **Resources and References**<br>N/A | |
| | **Evaluation**<br>Test: Test #3 (Chapters 20-24, 26 & 27 in Week 14)<br>Assignment: Assignment | |
| **Wk.** | **Hours:** 1 **Delivery:** In Class | |
| 14 | **Course Learning Outcomes**<br>CLO1, CLO2, CLO3, CLO4, CLO5, CLO6, CLO7 | |
| | **Essential Employability Skills**<br>**Taught:** **Practiced:** EES1, EES2, EES6, EES7, EES10, EES11 | |
| | **Intended Learning Objectives**<br>Test # 3 (Units 13 - 17) | |
| | **Intended Learning Activities**<br>Test # 3 (Units 13 - 17) | |
| | **Resources and References**<br>N/A | |
| | **Evaluation**<br>Test: Test #3 (Chapters 20-24, 26 & 27 in Week 14)<br>Assignment: Assignment | **Weighting**<br>20% |