

Course Prefix/Number/Title: BIOL 220 Anatomy and Physiology I

Number of Credits: 4

Course Description:

A study of the structure and function of the human body.

Pre-/Co-requisites: NA

Course Objectives:

1. Students understand the organization of the body from simple to complex, from the chemical level to the system level and the inter-relationships between them.
2. Students gain an understanding of the role and importance of passive and active processes, membrane potentials, and feedback systems have in maintaining homeostasis
3. Understand diagnostic treatments, procedures and technology used to identify and treat human disease and disorders.
4. Understand disease mechanisms in each system.
5. Understand the chemical basis of life and the anatomy and physiology of cells and tissues.
6. Understand body structure and function.
7. Understand the link between homeostatic imbalance and disease.
8. Organ systems that can be covered include musculoskeletal, respiratory, circulatory, nervous, integumentary, endocrine, lymphatic, digestive, reproductive, and urinary.

Instructor: Janelle Green

Office: NSC 113

Office Hours: schedule via e-mail

Phone: 701-228-5472 (not available during the summer term)

Email: [Janelle.a.green@dakotacollege.edu](mailto:Janelle.a.green@dakotacollege.edu)

Lecture/Lab Schedule: online

Textbook(s):

Anatomy and Physiology, 9<sup>th</sup> or 10<sup>th</sup> edition; **Patton and Thibodeau**

*Available and can be ordered at the Dakota College Bookstore*

Anatomy and Physiology, 10<sup>th</sup> edition; **Patton and Thibodeau;**

*HOL Science Lab Kit and Subscription*

ProctorU proctoring services

## Respondus Lockdown Browser

### Course Requirements:

Grading is based on, although subject to slight modification, quizzes (427), exams (595), and laboratory/assignment (310) points.

**ATTENDANCE & EFFORT**—You can expect to spend a minimum of 6-8 hours per week studying for this course in order to receive a minimum passing grade.

**READING**—Our text utilizes a systemic approach to the study of the human body. This method is appropriate at this level for students considering careers in the Health Sciences. Whereas each chapter deals with separate organ systems, it will be very important to keep in mind the interaction among systems as the course progresses. We will be covering a great deal of material in this class & the amount of terminology has been equated with learning a foreign language. Keep up with your chapter assignments. We will not have time to cover the entirety of your reading assignments in the time allotted for Lecture—Not all material covered in Lecture will be found in the text, nor will all topics in the text be covered in Lecture.

**GRADING** —Letter grades are given as follows:

- A = 89.5-100% of the total points
- B = 79.5 - <89.5% of the total points
- C = 69.5 - <79.5% of the total points
- D = 59.5 - <69.5% of the total points
- F = <59.5% of the total points

### **Tentative Course and Lab Outline:**

Unit 1/23 :

- Reading: Organization of the Body (Ch.1) and Homeostasis (Ch.2)
- Chemical Basis of Life (Ch.3) and Biomolecules (Ch.4)
- Lab: Safety and Tutorial
- Lab: Overview of Anatomy
- Quiz: Ch. 1 & Ch. 2
- Quiz: Ch. 3 & Ch. 4

Unit 2 2/6 :

- Reading: Cell Structure (Ch.5), Plant and Animal Cells and Cell Function (Ch.6)
- Quiz: Ch. 5 & Ch. 6
- Reading: Cell Growth and Development (Ch.7) and Introduction to Tissues (Ch.8)
- Quiz: Ch. 7 & Ch. 8
- Lab: Histology

Unit 3 2/20 :

- Reading: Tissue Types (Ch.9)
- Quiz: Ch. 9
- Reading: Skin (Ch.10) and Skeletal Tissues (Ch. 11)
- Lab: Overview of the Skeletal System

- Quiz: Ch. 10 & Ch. 11
- Unit 4 3/6:
- Reading: Axial Skeleton (Ch.12) and Appendicular Skeleton (Ch.13)
  - Reading: Articulations (Ch.14)
  - Lab: Axial and Appendicular Skeleton
  - Quiz: Ch. 12 & Ch. 13
  - Quiz: Ch. 14
  - Exam: Skeletal Diagram
  - Midterm
- Unit 5 3/20:
- Reading: Axial Muscles (Ch.15) and Appendicular Muscles (Ch.16)
  - Reading: Muscle Contraction (Ch.17)
  - Quiz: Ch. 15 & Ch. 16
  - Quiz: Ch. 17
  - Lab: Muscle Physiology
  - Lab: Joints and Body Movement
  - Exam: Labeling Muscles
- Unit 6 4/3 :
- Reading: Nervous System Cells (Ch.18) and Nerve Signaling (Ch.19)
  - Reading: Central Nervous System (Ch.20) and Peripheral Nervous System(Ch.21)
  - Assignment: Nervous System Cells and Signaling
  - Quiz: Ch. 18 & Ch. 19
  - Quiz: Ch. 20 & Ch. 21
  - Lab: Overview of the Gross Anatomy of the Central Nervous System
  - Exam: Nervous system labeling
- Unit 7 4/17:
- Reading: Autonomic Nervous System (Ch.22) and General Senses (Ch.23)
  - Reading: Special Senses (Ch.24) and Endocrine Regulation (Ch.25)
  - Quiz: Ch. 22 & Ch. 23
  - Quiz: Ch. 24 & Ch. 25
  - Lab: Reflex and Sensory Physiology
  - Exam: Sensory organs diagrams
- Unit 8 5/1:
- Reading: Endocrine Glands (Ch.26)
  - Assignment: Endocrine Glands
  - Quiz: Ch. 26
  - Final

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):

General Education Competency/Goal # 1: Identifies the interrelationships between humans and their environment.

LO # 3: Applies scientific information in everyday life

Relationship to Campus Focus:

This course addresses the campus theme by incorporating the latest diagnostic procedures, treatments, and other technologies that are used to identify and treat human diseases and disorders.

#### Classroom Policies:

##### Late Policy:

Late work is NOT accepted. If you are planning on being gone you should complete all work that is due ahead of time. Technology issues do sometimes arise, but you are responsible for correcting those issues. Practice good time management and do not save work for the last minute just in case an issue does arise.

##### Electronic Device Policy:

No outside resources should be used during quizzing and testing. This includes but not limited to other electronic devices other than your computer and textbook resources.

##### Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

##### Academic Integrity:

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

##### Disabilities or Special Needs:

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

##### Title IX:

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors,

clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.