



BIOL 220 ANATOMY AND PHYSIOLOGY I

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

Number of Credits: 4 semester credits

Course Description: A study of the structure and function of the human body.

Course Objective:

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.

Pre-/Co-requisites: None

Instructor: Janelle Green

Office: NSC 113 Office Hours: N/A Phone: (701)-228-5472

Email: Janelle.a.green@dakotacollege.edu

Lecture Schedule: Online Lab Schedule: Online

Textbook: Anatomy and Physiology, Patton and Thibodeau, 9th or 10th ed.

Lab Manual: Hands on Labs.

Your lab kits can be picked up from the Bookstore on DCB campus or ordered by emailing christina.ennen@dakotacollege.edu or calling 701-228-5458.

Please pick-up or order your corresponding course lab kit within the first week of class!

Lab Registration link - <https://myhol.holscience.com/enroll/czbd-rdvx-fnpz-ksvb>

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

LO # 3: Applies scientific information in everyday life

Course Requirements: Grading is based on a standard college curve, where students earn a grade based upon the percent of total possible points they obtain. Although subject to slight modification based on the discretion of the instructor, this course will consist of 1000 points (Chapter notes 5 points each, 17 quizzes worth 10-65 points each, 1 mid-term, and 1 final exam worth 200 points each). Laboratory and assignment points are worth approximately 360 points and discussions 125 points to obtain the total points possible for the course (approximately 1000). Late work within this course is NOT accepted. Final letter grades are assigned based on the following criteria:

- 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:

This schedule is tentative and can be changed at the discretion of the instructor.

Week 1:

- Reading: Organization of the Body (Ch.1) and Homeostasis (Ch.2)
- Labs (15 pts): Getting Started (5 pts) & Laboratory Safety (10 pts)
- Chapter notes (5pts)
- Discussion (15 pts)
- Quiz (20 pts): Ch. 1 & Ch. 2

Week 2:

- Reading: Chemical Basis of Life (Ch.3) and Biomolecules (Ch.4)
- Begin Lab (40 pts): Overview of Anatomy
- Chapter notes (5pts)
- Discussion (15 pts)
- Quiz (20 pts): Ch. 3 & Ch. 4

Week 3:

- Reading: Cell Structure (Ch.5) and Cell Function (Ch.6)
- Lab Due (40 pts): Overview of Anatomy
- Chapter notes (5pts)
- Discussion (15 pts)
- Quiz (20 pts): Ch. 5 & Ch. 6

Week 4:

- Reading: Cell Growth and Development (Ch.7) and Introduction to Tissues (Ch.8)
- Begin Lab: Histology
- Chapter notes (5pts)
- Discussion (15 pts)
- Quiz (20 pts): Ch. 7 & Ch. 8

Week 5:

- Reading: Tissue Types (Ch.9)

- Chapter notes (5pts)
 - Tissue Notecard/Table Completion (15 pts)
 - Lab Due (40 pts): Histology
 - Discussion (15 pts)
 - Quiz (10 pts): Ch. 9
 - Tissue Image Quiz (15 pts)
- Week 6:
- Reading: Skin (Ch.10) and Skeletal Tissues (Ch. 11)
 - Lab (40 pts): Overview of the Skeletal System
 - Discussion (15 pts)
 - Quiz (20 pts): Ch. 10 & Ch. 11
 - Skin Diagram Quiz (15 pts)
- Week 7:
- Reading: Axial Skeleton (Ch.12) and Appendicular Skeleton (Ch.13)
 - Begin Lab: Axial and Appendicular Skeleton
 - Discussion (15 pts)
 - Quiz (20 pts): Ch. 12 & Ch. 13
 - Skeletal Diagram Quiz (45 pts)
- Week 8:
- Reading: Articulations (Ch.14)
 - Lab Due (40 pts): Axial and Appendicular Skeleton
 - Discussion (15 pts)
 - Midterm (200 pts)
- Week 9:
- Reading: Axial Muscles (Ch.15) and Appendicular Muscles (Ch.16)
 - Lab (40 pts): Joints and Body Movement
 - Discussion (15 pts)
 - Quiz (20 pts): Ch. 15 & Ch. 16
 - Muscular Image Quiz (50 pts)
- Week 10:
- Reading: Muscle Contraction (Ch.17)
 - Lab (40 pts): Muscle Physiology
 - Discussion (15 pts)
 - Quiz (10 pts): Ch. 17
- Week 11:
- Reading: Nervous System Cells (Ch.18) and Nerve Signaling (Ch.19)
 - Begin Lab: Overview of the Gross Anatomy of the Central Nervous System
 - Discussion (15 pts)
 - Quiz (20 pts): Ch. 18 & Ch. 19
- Week 12:
- Reading: Central Nervous System (Ch.20) and Peripheral Nervous System (Ch.21)
 - Lab Due (40 pts): Overview of the Gross Anatomy of the Central Nervous System
 - Discussion (15 pts)
 - Quiz (20 pts): Ch. 20 & Ch. 21
- Week 13:

- Reading: Autonomic Nervous System (Ch.22) and General Senses (Ch.23)
- Begin Lab: Reflex and Sensory Physiology
- Discussion (15 pts)
- Quiz (20 pts): Ch. 22 & Ch. 23

Week 14:

- Reading: Special Senses (Ch.24) and Endocrine Regulation (Ch.25)
- Lab Due (40 pts): Reflex and Sensory Physiology
- Discussion (15 pts)
- Quiz (20 pts): Ch. 24 & Ch. 25

Week 15:

- Reading: Endocrine Glands (Ch.26)
- Assignment (40 pts): Endocrine Glands
- Discussion (15 pts)
- Quiz (10 pts): Ch. 26

Week 16:

- Final (200 pts):

Relationship to Campus Focus/Theme

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

- 1) Be respectful of other students and the instructor
- 2) No late work accepted.
- 3) Use of outside resources during quizzes and exam and plagiarism will result in a score of zero.

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

All students are expected to adhere to the highest standards of academic integrity. Dishonesty in the classroom or laboratory and with assignments, quizzes, and exams is a serious offense and is subject to disciplinary action by the instructor and college administration. For more information, refer to the Student Handbook.

Disabilities and Special Needs

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

If you have a disability for which you need accommodations, you are encouraged to contact your

instructor and Jackie Migler at 701-228-5672 to request disability support services as early as possible during the beginning of the semester.

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.