

**Course Prefix/Number/Title:** BIOL 221 - Anatomy and Physiology II

**Number of Credits:** 4

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

- 1) Students gain a more thorough understanding of the inter-relationships and organizational hierarchy among the systems of the body.
- 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) Diagnostic procedures
- 4) Treatments of diseases
- 5) Organ systems that can be covered include musculoskeletal, respiratory, circulatory, nervous, integumentary, endocrine, lymphatic, digestive, reproductive, and urinary.

**Course Objectives**

- 1) To learn and retain information essential to a broad knowledge of human anatomy and physiology.
- 2) To understand and utilize scientific methods of inquiry.
- 3) To practice sound, safe, and sensible laboratory techniques.
- 4) To apply scientific information and principles to everyday life.

**Pre-/Co-requisite:** BIOL 220

**Instructor:** Larry Brooks

**Office:** NSC 102

**Office Hours:** By appointment

**Phone:** (701) 228-5457

**E-mail:** [larry.brooks@dakotacollege.edu](mailto:larry.brooks@dakotacollege.edu)

**Lecture Schedule:** 7:40 - 8:30 AM on M, W, and F in NSC 105

**Lab Schedule:** 8:00-9:50 am on Thursday in NSC 128 and by arrangement at distant sites

**Textbooks:** Anatomy & Physiology, Patton, 10th Edition, 2019  
Laboratory Manual Anatomy & Physiology, 10<sup>th</sup> Edition, 2019

**Course Requirements:**

Although subject to slight modification based on the discretion of the instructor, the lecture component of this course consists of approximately 900 points (12 drop quizzes @ 5 points each, 50 points for assignments, 3 lecture exams @ 200 points each, and one final exam @ 200 points). Lecture points are added to laboratory points (about 300 points) to obtain the total points possible for the course (about 1200). (Note: Adjustments may be made to lecture and/or lab points so that the lecture constitutes 3/4 of the total points for the course.) There is a one week grace period to makeup any missed exam. Any missed exam not made up within the allotted time will be given a zero. Makeup exams may be of an essay nature and are usually considered more difficult. Makeups are not allowed on drop quizzes; however, the lowest two quiz scores will be dropped. Grading is based on a standard college curve, where students earn a grade based upon the percent on total possible points they obtain. Letter grades for the course 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 Outline:**

LECTURE SCHEDULE

<u>DATE</u>	<u>TOPIC</u>	<u>READING</u>
1-12	Introduction and Blood	Chpt. 27
1-14	Blood	Chpt. 27
1-17	NO CLASS - MARTIN LUTHER KING DAY	
1-19	Anatomy of the Cardiovascular System	Chpt. 28
1-21	Anatomy of the Cardiovascular System	Chpt. 29
1-24	Physiology of the Cardiovascular System	Chpt. 30
1-26	Physiology of the Cardiovascular System	Chpt. 30
1-28	Lymphatic System	Chpt. 31
1-31	Immunity	Chpt. 32
2-2	Immunity	Chpt. 33
2-4	TEST I	
2-7	Stress	Chpt. 34
2-9	Anatomy of the Respiratory System	Chpt. 35
2-11	Anatomy of the Respiratory System	Chpt. 35
2-14	Physiology of the Respiratory System	Chpt. 36
2-16	Physiology of the Respiratory System	Chpt. 37
2-18	Anatomy of the Digestive System	Chpt. 38
2-21	NO CLASS – PRESIDENTS DAY	
2-23	Anatomy of the Digestive System	Chpt. 39
2-25	Physiology of the Digestive System	Chpt. 40
2-28	Physiology of the Digestive System	Chpt. 40
3-2	Nutrition and Metabolism	Chpt. 41
3-4	Nutrition and Metabolism	Chpt. 41
3-7	Nutrition and Metabolism	Chpt. 41
3-9	Nutrition and Metabolism	Chpt. 41
3-11	TEST II	
3-14 to 3-18	SPRING BREAK - NO CLASSES	

3-21	Urinary System	Chpt. 42
3-23	Urinary System	Chpt. 42
3-25	Urinary System	Chpt. 42
3-28	Fluid and Electrolyte Balance	Chpt. 43
3-30	Acid-Base Balance	Chpt. 44
4-1	Male Reproductive System	Chpt. 45
4-4	Male Reproductive System	Chpt. 45
4-6	Female Reproductive System	Chpt. 46
4-8	Female Reproductive System	Chpt. 46
4-11	Birth Control	Chpt. 46
4-13	TEST III	
4-15	NO CLASS – GOOD FRIDAY	
4-18	NO CLASS – EASTER MONDAY	
4-20	Growth and Development	Chpt. 47
4-22	Growth and Development	Chpt. 47
4-25	Growth and Development	Chpt. 47
4-27	Genetics	Chpt. 48
4-29	Genetics	Chpt. 48
5-2	Genetics	Chpt. 48
5-4	Genetics	Chpt. 48
5-6	Final Exam Review	
5-12	Final Exam (9:00 - 11:00 am)	

#### LAB SCHEDULE

<u>DATE</u>	<u>TOPIC</u>	<u>LAB #</u>
1-20	Blood	34
1-27	Heart and Blood Pressure	35 & 37
2-3	LAB EXAM I	
	Circulatory and Lymphatic Systems	38 & 39
2-10	Circulatory and Lymphatic Systems	40
2-17	LAB EXAM II	
	Respiratory System	41-43
2-24	Digestive System, Enzymes and Digestion	44 & 45
3-3	LAB EXAM III	
3-10	Enzymes and Digestion	46
3-17	NO LAB - SPRING BREAK	
3-24	Urinary System	47 & 48
3-31	Urinalysis	49
4-7	Reproductive Systems	50-52
4-14	LAB EXAM IV	
4-21	Development	53
4-28	Genetics and Heredity	54
5-5	LAB EXAM V	

#### **General Education Competency/Learning Outcome(s)**

This course meets General Education Competency 1: Identifies the interrelationships between humans and their environment and Learning Outcome #3: Applies scientific information to everyday life.

### **Relationship to Campus 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) Cell phones and related devices are prohibited in the classroom at all times. It is recommended that you do not bring your cell phone or other electronic devices into the classroom or, at the very least, turn it off.
- 2) Food and beverages are permitted in accordance with IVN classroom policy.
- 3) Be respectful of other students, technicians, instructors, and guests.

### **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 and 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.