

## BIOLOGY 220/220L – Anatomy and Physiology I – Syllabus

### DAKOTA COLLEGE AT BOTTINEAU

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<b>Instructor</b>	<b>Shubham Datta, PhD</b> Office: NSC 114; office hours posted on door and by appointment Telephone: 710-228-5463 Email: shubham.datta@ndus.edu
<b>Number of Credits</b>	4 semester credits
<b>Pre-/Co requisites</b>	BIOL 150 or instructor approval
<b>Lecture Schedule</b>	NSC 105; 7:35 – 8:25 am MWF
<b>Laboratory</b>	NSC 128; 7:30 – 8:50 am Thursday and by arrangement
<b>Textbook</b>	Anatomy and Physiology, 9 <sup>th</sup> or 10 <sup>th</sup> edition; <b>Patton and Thibodeau</b> <i>Available and can be ordered at the Dakota College Bookstore</i>
<b>Lab Manual</b>	Anatomy and Physiology, 10 <sup>th</sup> edition; <b>Patton and Thibodeau;</b> Laboratory Manual. <i>Available and can be ordered at the Dakota College Bookstore</i>
<b>Study Resources</b>	Quizzes, study-tips & other resources from lecture can be found on Anatomy and Physiology I <b>BLACKBOARD</b> shell.

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**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, the lecture component of this course will consist of 700 points (10 drop quizzes worth 20 points each out of 12, 4 lecture exams worth 100 points each, and one final exam worth 100 points). Lecture points are added to laboratory points, total 500 (4 exams x 100 = 400 points + 5 quizzes x 20 = 100) to obtain the total points possible for the course (1240). (Note: Regardless of the number of points, lecture points will comprise 50% of the total points and lab points will comprise 50% of the total points.) Drop quizzes may not be made up, but students will be able to drop their two lowest scores of the twelve drop quizzes given during the semester. There is a one-week grace period to make up any missed exam or assignment. Any missed exam/work 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. It is the responsibility of the student to schedule make-up work during a date and time convenient to both student and instructor.

**ATTENDANCE & EFFORT**—Students are required to attend the 3 one-hour Lectures, & 1 two-hour Laboratory each week. Attend each Lecture - Some Lecture material will not be found in your textbook. Attend each Laboratory session. Additional Lecture material will be presented in the Lab. Lab material will appear during your Lecture exams, & visa-versa. 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. Please come to Lecture well prepared: look at figures & tables & read through the assigned chapters before class, without trying to fully digest the material. Then, after Lecture, go back to the text & re-read sections that were emphasized & "flesh-out" your notes. Occasionally, I may make mistakes in Lecture. If in doubt, refer to your textbook for the proper terminology & spelling.

**LECTURE EXAMS**—Exam dates are indicated in the Course schedule. Exam dates may be changed if circumstances (due to inclement weather) so dictate - the Exam will be held on the next regularly scheduled class meeting. Exams are not comprehensive, however, you will be expected to integrate previous material & vocabulary into each subsequent Exam. There will be 3 lecture Exams & a non-comprehensive Final Exam.

**MAKE-UP LECTURE EXAMS**—Make-up Exams are granted, but only under extreme circumstances. This opportunity is **ONLY** available if you (a) have the absence excused by the Instructor 72 HOURS PRIOR to the Exam, and/or (b) you submit a detailed letter after the exam with supporting evidence (Physician's letter, Newspaper clippings, Police reports, Obituaries, Repair bills) as to why the Exam was missed. Only one Exam can be made-up in this manner. If the missed Exam is not made-up, you will receive a score of 0.0 (zero) for that Exam.

**LABORATORY**—Attendance is mandatory. Refer to the schedule for Lab exercises that will be performed. We will make extensive use of models & charts. Refer to the relevant sections of the Lecture text to prepare for each Lab so that you can work efficiently & be prepared for your Quizzes. **BRING YOUR TEXTBOOK TO LAB!**

**WEEKLY LAB QUIZZES**—Lab Quizzes (20 pts each) will cover material from Lecture, reading assignments, Lab manual objectives, & Lab kick-off presentations. Quizzes will be of mixed format, i.e., may include multiple choice, matching, completion, identification, etc., at the discretion of your Lab Instructor. Quizzes may be given at any time, unannounced or otherwise, at the beginning, during, or end of any Lab period. In order to be prepared for Quizzes, you should review your notes & keep up with the assigned reading!

**PRACTICAL EXAMS**—Four Practical Exams will cover material from Lectures, reading assignments, Lab manual objectives, & Lab kick-off presentations (100 pts each). During these exams, you will be asked to identify labeled structures indicated on the models, & charts stationed throughout the Lab. The 3 Practical exams & your 5 best Quizzes (out of 7) sum to a total of 500 points (42% of course grade).

**MAKE-UP PRACTICALS GIVEN ONLY AT THE DISCRETION OF THE LAB COORDINATOR!**

**GRADING**—Your final grade will be based upon the 400 pts earned in Lecture and the 400 pts earned in Lab: 800 pts total. 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

**CHALLENGING A GRADE**—Questions regarding Lecture exams are to be guided to Dr. Datta. Questions regarding Practical exams are to be guided to respective lab Instructor and/or Dr. Datta. Questions regarding lab quizzes can be answered by your Lab Instructor(s). Please make all inquiries regarding the accuracy of your grades within one week of the exam. Appeals must be supported by published evidence (i.e., text, atlas, lecture outlines). **NO CHANGES TO YOUR SCORE WILL BE MADE AFTER THIS ONE WEEK PERIOD!**

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

**LO # 3:** Applies scientific information in everyday life

## **GENERAL EDUCATION GOAL AND OBJECTIVES**

### **Goal**

The goal of this course is to facilitate student learning about human anatomy and physiology so that students better understand and appreciate the complexities of and interactions between organ systems in order to promote the advancement of life sciences in society.

### **Objectives**

- 1) To learn and retain information essential to a broad knowledge of human anatomy and physiology.
- 2) Demonstrate the application of the scientific methods of inquiry (Goal 1; Objective 1)
- 3) Practice sound, safe, and sensible laboratory techniques.
- 4) Demonstrate knowledge of the natural environment (Goal 1; Objective 2)
- 5) Demonstrate an awareness of the role of science in everyday life (Goal 1; Objective 2)

### **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, iPods, and related technology are prohibited in the classroom at all

times. It is recommended that you do not bring your cell phone into the classroom or, at the very least, turn it off.

- 2) Food and beverages are permitted in accordance with 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**

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**

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact your instructor and/or Jackie Migler in the Disability Services TH 2213 (228-5672) 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. If you have experienced any form of gender or sex-based discrimination or harassment, including non-consensual sexual intercourse, sexual harassment, relationship violence, or stalking, know that help and support are available.

DCB has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The College strongly encourages all students to report any such incidents to the College Title IX Coordinator.

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 you tell 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. If you wish to speak to a confidential employee who does not have this reporting responsibility, you can find a list of resources on the Title IX website. [www.dakotacollege.edu/student-life/safety/title-ix](http://www.dakotacollege.edu/student-life/safety/title-ix)

### **TENTATIVE LECTURE OUTLINE**

DATE	TOPIC	READING
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Lec 1	Introduction	Syllabus and course information
Lec 2	Overview and Organization of the Body	Chpt 1
Lec 3	Basic Chemistry	Chpt 2
Lec 4	Inorganic Chemistry	Chpt 2
Lec 5	Organic Chemistry	Chpt 2
Lec 6	Anatomy of Cells	Chpt 3
Lec 7	Anatomy of Cells	
	<b>EXAM I</b>	-
Lec 8	Transport	Chpt. 4
Lec 9	Anabolism/Catabolism	Chpt. 4
Lec 10	Growth and Reproduction	Chpt. 5
Lec 11	Growth and Reproduction	Chpt. 5
Lec 12	Tissues	Chpt. 6
Lec 13	Tissues	Chpt. 6
Lec 14	Skin	Chpt. 7
Lec 15	Skin	Chpt. 7
	<b>EXAM II</b>	-
Lec 16	Skeletal System	Chpt. 8
Lec 17	Skeletal System	Chpt. 9
Lec 18	Skeletal System	Chpt. 9
Lec 19	Articulations	Chpt. 10
Lec 20	Articulation	Chpt. 10
Lec 21	Muscle System	Chpt. 11
Lec 22	Muscle System	Chpt. 11
Lec 23	Muscle Physiology	Chpt. 12
Lec 24	Muscle Physiology	Chpt. 12
	<b>EXAM III</b>	-
Lec 25	Nerve Cells	Chpt. 13
Lec 26	Nerve Physiology	Chpt. 13
Lec 27	Nerve Physiology	Chpt. 13
Lec 28	Nerve Physiology	Chpt. 13
Lec 29	Central Nervous System	Chpt. 14
Lec 30	Brain	Chpt. 14
Lec 31	Brain	Chpt. 14
Lec 32	Peripheral Nervous System	Chpt. 15

Lec 33	Autonomic Nervous System	Chpt. 16
	<b>EXAM IV</b>	-
Lec 34	Receptors	Chpt. 17
Lec 35	Smell and Taste	Chpt. 17
Lec 36	Hearing/Sight	Chpt. 17
Lec 37	Sight	Chpt. 17
Lec 38	Endocrine System	Chpt. 18
Lec 39	Endocrine System	Chpt. 19
Lec 40	Endocrine System	Chpt. 19
Lec 41	Endocrine System	Chpt. 19
	<b>FINAL</b>	<b>(Time TBD)</b>
	<b>Holidays</b>	
2-Sep	NO CLASS - LABOR DAY	
14-Oct	Assessment Day - Class tentative	
11-Nov	NO CLASS - VETERANS DAY	
Nov 28 - 29	NO CLASS THANKSGIVING HOLIDAY	

### Tentative Lab Outline:

WEEK	TOPIC	LAB#
Week 2 <b>Sep 2 - 8</b>	Introduction/Organization of the Body and Microscope	1 & 3
Week 3	Cell Anatomy, Transport and Cell Life Cycle	4, 5 & 6
Week 4 <b>Sep 16 – 20</b>	<b>LAB EXAM I</b>	-
Week 5	Tissues	7 & 8
Week 6	Skin and begin Skeleton	9 & 10
Week 7	Skeleton	11, 12, & 13
Week 8	Extremities and Joints	14, 15, & 16
Week 9	<b>LAB EXAM II</b>	-
Week 10	Muscles	17 & 18
Week 11	Muscles	19
Week 12	Nerves	21 & 22
Week 13	<b>LAB EXAM III</b>	-
Week 14	CNS and Brain	23, 24, & 25
Week 15	Touch/Taste/Smell	26, 27, & 28
Week 16	Ear/Eye/Endocrine	29, 30, 31, & 32

Week 17

**FINAL LAB EXAM**

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