



Course Prefix/Number/Title: BIOL 220 Anatomy and Physiology I (Dual-Credit)

Number of Credits: 4

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

Pre-/Co-requisites: None

**Instructor:** Emily Schaefer

**Office Hours:** By appointment

**Phone:** 701-240-7782

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Course Required Text (both available through Dakota College Bookstore):

- Textbook: Anatomy and Physiology, 9th, or 10th edition; Patton and Thibodeau
- Laboratory Manual: Anatomy and Physiology, 10th edition; Patton and Thibodeau

**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 understand the role and importance of passive and active processes, membrane potentials, and feedback systems 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.

**Grading:**

- Grades will be calculated based on total points.
- Grades will be calculated based on the following:
  - Weekly Quizzes
  - Exams (4 total)
    - 2 online, a paper mid-term and a paper final.
  - Lecture Points – 5 points daily for attendance/participation
  - Weekly Lab Activities/Participation (5 points/daily)
  - Lab Quizzes & Exams
- The following grading scale will apply to both lecture & lab grades:

- 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

### **Attendance & Effort**

- Students are required to attend lecture MWF, & two laboratory sessions each week. It is important that you attend EACH class. Some Lecture material will not be found in your textbook. 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 to receive a minimum passing grade.
- For each lecture and lab class, the following behavior expectations will be in place. If you choose not to follow these expectations, you may be asked to leave:
  - **Be Respectful** – treat all students, teachers, and class materials with respect.
  - **Be Responsible** – keep track of the course schedule and complete assignments.
  - **Be Safe** – follow all lab safety procedures and instruction directions.
  - **Be Ready to Learn** – come to lecture and lab prepared.

### **Lecture**

- Each week we will be studying a different body system, and learning how each system interacts with the other. There is a lot of information and not all of it will be presented during the lecture. You will need to read your textbook, preferably before the lecture on that chapter. A tentative schedule will be included with this syllabus, to help you prepare for each lecture.
- The lectures are the best time for you to ask questions and get clarifications on your notes from reading the chapter. Pay attention to the key terms and diagrams, as those will appear on tests and quizzes. The PowerPoint slides will be available to you prior to the class so you can print those off if you choose to help you take notes during lecture.
- I am not perfect, and I may make a mistake during lecture, so make sure you refer to your text for clarification. I will be honest and if I am not sure of an answer to your question, I will verify the information before confirming my answer.

### **Lecture Exams & Quizzes**

- There will be 4 lecture exams for this course.
  - Two exams will be online. There will be a paper mid-term exam and a paper final exam.
  - You will have 48 hours to complete the online exams. There will not be a lecture on the day of the exams, but I will be available during the regular class time to answer questions you may have before you take the exam. The exam will open at the start of class on the scheduled day and must be completed before the next class.
  - For paper exams, they will be given during regular class time. The exam will be proctored in the classroom. I will be available during the exam for questions or clarifications, but you will need to complete the exam during that class time.

- If you know that you will miss the mid-term exam, you need to contact me to plan for you to complete the exam. If you miss the mid-term exam and there has been no contact with me, you will not be able to make it up and your grade will be a zero. If you are late, you will not have extra time to complete the exam unless you have arranged it with me before the exam date.
- There will be a quiz each week posted at the end of class on the Friday of that week and due by midnight the following Monday. You will have 2 chances to take each quiz, and the **SECOND** attempt's score will be the one kept.
  - If something comes up that prevents you from completing an online quiz or test, you will need to contact me ASAP and provide documentation as to the reason you were not able to complete the quiz/exam to be given an opportunity to make it up.
- Exams and quizzes are closed book.

### **Late Work**

- To keep up with grading and ensure that your grades are accurate, any assignment, quiz or exam that is not completed by the original due date will be given a zero in the gradebook and you will **not** be able to make up that assignment.

### **Lab Classes**

- Attendance for lab is required each week to fulfill the course requirements. The information presented during the lecture will be used during lab activities.
- It will be important that you come to each lab prepared, having completed the required reading and pre-lab activities.
- You will need to bring both your lab manual and textbook to each lab class.
- Lab Quizzes/Handouts/Activities (20 pts each) will cover material from Lecture, reading assignments, Lab manual objectives, & Lab kick-off presentations. Quizzes will be in 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. To be prepared for Quizzes, you should review your notes & keep up with the assigned reading!
- Lab Exams
  - There will be 3-4 practical lab exams that will cover material from the labs as well as the lectures. These exams will include identifying and labeling structures from models & charts that will be stationed throughout the lab.
  - These exams take time to set up, so you need to plan to be present for these exams! If you are late, you will not receive extra time to complete the exam.
  - IF you know you are going to be gone, you need to contact me AND your lab instruction ASAP so you can make other arrangements to complete the exam PRIOR to the date of the lab exam.

### **Communication**

- It is your responsibility to track and complete the assignments for this course and attend each required class. A tentative schedule is included and due dates on Blackboard to help you keep track of assignments and due dates.

- Use the various communication methods available in this course (email, text, phone, Blackboard Messages) to communicate with myself and your lab instructors throughout the class if a situation arises that will prevent you from attending class or completing an assignment BEFORE the due date. Please ask questions and get clarification on items BEFORE the course quizzes and exams.
- It is YOUR responsibility to reach out to me to plan to complete assignments you miss.

**Tentative Course Outline** (subject to change at the discretion of the instructor, changes be communicated via Blackboard announcements)

| DATE           | TOPIC                                 | READING                          |
|----------------|---------------------------------------|----------------------------------|
| Lec 1 – 8/23   | Introduction/Overview/Chpt 1          | Syllabus and course info/ Chpt 1 |
| Lec 2 – 8/25   | Overview and Organization of the Body | Chpt. 1                          |
| Lec 3 – 8/28   | Homeostasis                           | Chpt. 2                          |
| Lec 4 – 8/30   | Chemistry of Life                     | Chpt. 3                          |
| Lec 5 – 9/1    | Biomolecules                          | Chpt. 4                          |
| Lec 6 – 9/6    | Cell Structure                        | Chpt. 5                          |
| Lec 7 – 9/8    | Cell Structure                        | Chpt 5                           |
| Lec 8 – 9/11   | Cell Function                         | Chpt. 6                          |
| Lec 9 – 9/13   | Cell Function                         | Chpt. 6                          |
| <b>9/15</b>    | <b>EXAM I (online)</b>                | <b>Chpt 1-6</b>                  |
| Lec 10 – 9/18  | Growth and Development                | Chpt. 7                          |
| Lec 11 – 9/20  | Growth and Development                | Chpt. 7                          |
| Lec 12 – 9/22  | Tissues                               | Chpt. 8                          |
| Lec 13 – 9/25  | Tissue Types                          | Chpt. 9                          |
| Lec 14 – 9/27  | Skin                                  | Chpt. 10                         |
| Lec 15 – 9/29  | Skin                                  | Chpt. 10                         |
| Lec 16 – 10/2  | Skeletal System                       | Chpt. 11/12                      |
| Lec 17 – 10/4  | Skeletal System                       | Chpt. 12/13                      |
| Lec 18 – 10/6  | Skeletal System                       | Chpt. 13/14                      |
| <i>10/9</i>    | <i>Assessment Day</i>                 | <i>No Class</i>                  |
| <b>10/11</b>   | <b>Mid Term Exam (paper)</b>          | <b>Chpt. 7-13</b>                |
| Lec 19 – 10/13 | Articulations                         | Chpt. 14                         |
| Lec 20 – 10/16 | Articulations                         | Chpt. 14                         |
| Lec 21 – 10/18 | Muscle System                         | Chpt. 15                         |
| Lec 22 – 10/20 | Muscle System                         | Chpt. 16                         |
| Lec 23 – 10/23 | Muscle Physiology                     | Chpt. 17                         |
| Lec 24 – 10/25 | Muscle Physiology                     | Chpt. 17                         |
| Lec 25 – 10/27 | Nerve Cells                           | Chpt. 18                         |
| Lec 26 – 10/30 | Nerve Physiology                      | Chpt. 19                         |

|                   |                           |                                      |
|-------------------|---------------------------|--------------------------------------|
| Lec 27 – 11/1     | Nerve Physiology          | Chpt. 19                             |
| Lec 28 – 11/3     | Nerve Physiology          | Chpt. 19                             |
| Lec 29 – 11/6     | Central Nervous System    | Chpt. 20                             |
| <b>11/8</b>       | <b>EXAM IV (online)</b>   | <b>Chpt 14-20</b>                    |
| Lec 30 – 11/13    | Brain                     | Chpt. 20                             |
| Lec 31 – 11/15    | Brain                     | Chpt. 20                             |
| Lec 32 – 11/17    | Peripheral Nervous System | Chpt. 21                             |
| Lec 33 – 11/20    | Autonomic Nervous System  | Chpt. 21                             |
| Lec 34 – 11/22    | Receptors                 | Chpt. 23/24                          |
| Lec 35 – 11/27    | Smell and Taste           | Chpt. 23                             |
| Lec 36 – 11/29    | Hearing/Sight             | Chpt. 23                             |
| Lec 37 – 12/1     | Sight                     | Chpt. 23                             |
| Lec 38 – 12/4     | Endocrine System          | Chpt. 25                             |
| Lec 39 – 12/6     | Endocrine System          | Chpt. 26                             |
| Lec 40 – 12/8     | Endocrine System          | Chpt. 26                             |
| <b>(Time TBD)</b> | <b>FINAL (paper)</b>      | <b>Chpt. 14-26, focused on 20-26</b> |

Lab Tentative Outline: (This schedule is tentative and may be changes at the discretion of the instructor)

| WEEK                    | TOPIC  | LAB#           |
|-------------------------|--|----------------|
| Week 2 – 8/29 & 8/31    | Introduction/Organization of the Body and Microscope | 1 & 3          |
| Week 3 – 9/5 & 9/7      | Quiz<br>Cell Anatomy, Transport and Cell Life Cycle  | 4, 5 & 6       |
| Week 4 – 9/12 & 9/14    | <b>LAB EXAM I</b>                                    | -              |
| Week 5 – 9/19 & 9/21    | Tissues  | 7 & 8          |
| Week 6 – 9/26 & 9/28    | Skin<br><b>LAB EXAM II</b><br>Skeleton               | 9 & 10         |
| Week 7 – 10/3 & 10/5    | Skeleton   | 11, 12, & 13   |
| Week 8 – 10/10 & 10/12  | Extremities and Joints                               | 14, 15, & 16   |
| Week 9 – 10/17 & 10/19  | <b>LAB EXAM III</b>                                  | -              |
| Week 10 – 10/24 & 10/26 | Muscles  | 17 & 18        |
| Week 11 – 10/31 & 11/2  | Muscles  | 19             |
| Week 12 – 11/7 & 11/9   | <b>LAB EXAM IV</b>                                   |                |
| Week 13 – 11/14 & 11/16 | Nerves   | 21 & 22        |
| Week 14 – 11/21         | Quiz<br>CNS and Brain                                | 23, 24, & 25   |
| Week 15 – 11/28 & 11/30 | Touch/Taste/Smell                                    | 26 & 28        |
| Week 16 – 12/5 & 12/7   | Ear/Eye/Endocrine<br>Quiz                            | 30, 31, 32, 33 |

### Electronic Device Policy:

- Electronic devices will only be used in class for answering in-class questions and review participation. You will be instructed to use them at those times. If you are on your phone/unauthorized computer/smart watch/headphones or any other unauthorized device while not instructed by myself then, I will ask you to leave my class for that day. You cannot be wearing any smart technology during ANY exam. You will be asked to remove it. If you choose not to remove it, you will be asked to leave and cannot complete the exam, which will result in a ZERO. All devices should be powered down during an exam.

### 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 essential 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 the College. 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.