



BASIC COURSE INFORMATION

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| Course Prefix, Number, and Title: | BIOL 220-1 (01500) BIOL 220-3 (02049) | Human Anatomy & Physiology: Part 1 Human Anatomy & Physiology: Part 1 |
| Credits: | Unit Hours/Credits: 4 units/credits Classroom study hours (CS): 3 hours Laboratory/Clinical hours (L/C): 3 hours | |
| Meeting Days and Times: | Monday Lecture 1:00 PM to 1:50 PM Memorial Hall Room 110 Tuesday LAB (sec-3) 10:00 AM to 12:50 PM Swain Hall Room 306 Tuesday LAB (sec-1) 1:00 PM to 3:50 PM Swain Hall Room 306 Wednesday Lecture 1:00 PM to 1:50 PM Memorial Hall Room 110 Friday Lecture 1:00 PM to 1:50 PM Memorial Hall Room 110 | |
| Semester/Year: | Fall Semester 2020 | |
| Course Dates in Campus Connection: | 16-week (spring semester) August 24, 2020 to December 18, 2020 . | |
| Mode of Delivery: | face-to-face | |
| Location: | Lecture: Memorial Hall Room 110 Lab: Swain Hall Room 306. | Minot State University. Minot State University. |

INSTRUCTOR INFORMATION

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| Name(s) of Faculty Member(s): | Aaron L. Ament, M.Sc., M.D. (Instructor for Lecture) Lori S. Ihli, B.S., B.A., B.S. Ed. (Instructor for LAB) |
| Office Location & Office Hours: | Swain Hall Room 308. Minot State University. Office Hours: Mon., Wed. and Fri. from 11AM to 1PM, or by Appointment. |
| Contact Information: | Phone: (701) 240-3373 Email: aaron.ament@ndus.edu lori.ihli@ndus.edu Website: www.amentanatomy.com |

ADDITIONAL COURSE INFORMATION

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| Course Catalog Description: | Structure and function of the human body dealing with the chemical, cellular, and tissue levels of organization and integumentary, skeletal, muscular, and nervous systems. |
| Placement Policies: | Each section of lab will have no more than 24 students. The section will not be overloaded. Any student on the waiting list will automatically be added to the enrolled status by campus connection once a student drops before the last day to add classes in rank order. If you do not get enrolled by the last day to add classes, then you will need to register to take the course in a future semester. No exceptions. Register for classes early to get the course you want in the semester you want. BIOL 220 and BIOL 221 are known to fill quickly. |

Prerequisite/Co-requisite Courses:

No prerequisite course is required to enroll in BIOL 220.

General Education Category (or Categories):

BIOL 220 does meet MSU's General Education Requirements in the FC2: Lab Science category, but not the CCS, PSR, and IP categories (CCS = Critical Capacities and Skills, PSR = Personal and Social Responsibility, IP = Interconnecting Perspectives). BIOL 220 is typically taken by those with majors requiring human anatomy courses or as an elective for those with an interest in the subject matter.

Required Course Materials:

Lecture Materials: *Anatomy & Physiology*, by OpenStax (the book is a FREE PDF at <https://openstax.org> You can also buy an inexpensive print copy in the bookstore or online).

Lab Materials: No lab manual to buy. I provide a lab handout for each lab when you arrive or have material written on the whiteboard. Your lecture book and the class website has all the photos and reference materials you will presented in the lab setting.

Student Learning Outcomes:

N/A for BIOL 220

Course Objectives:

As a result of taking BIOL 220 you will cover part 1 of 2 courses covering human anatomy and physiology. The individual learning outcomes of BIOL 220 are listed in the course catalog description and match the list of lecture titles presented. This is a hard course. There will be about 1000 anatomical and physiologic terms introduced throughout the semester. Many of these words or their derivations will be familiar to you from their common usage, but many are specific to the language of anatomy and this will be evident right from the very first lecture. It takes lots of time to memorize hundreds of new terms every few weeks, so be sure to work on it a little every day. Aside from the new anatomical terms, you will primarily be learning normal (non-diseased state) anatomy and physiology of the human body. When appropriate and where it highlights or emphasizes the reason a particular anatomical part or physiologic processes is taught, I will encourage discussion and go over some example diseases or injuries to show the close tie between form and function. Together, both BIOL 220 & 221 should prepare anyone interested in any of the medical or allied health professions as a career. After studying all materials and resources in the course, the student will be able to:

Lecture:

- Use anatomical terminology to identify and describe the locations of major organs in each organ system covered.
- Explain the interrelationships among molecular, cellular, tissue and organ functions in each system.
- Explain the physiological processes needed for the maintenance of homeostasis.
- Identify the causes and effects of homeostatic imbalances.
- Explain physiological processes of all body systems in detail and on an appropriate level (knowledge, comprehension, application and analysis).

Lab:

- Apply appropriate safety and ethical standards.
- Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, bones, and anatomical models.
- Work collaboratively and effectively in a group.
- Direct their own learning activities.
- Locate and Identify anatomical structures.

ASSIGNMENTS AND GRADING INFORMATION

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| Grading Policy and Scale: | Lecture Exam 1 (50 multiple-choice questions on chapters 1, 2, 3, 4, 5) | 100 points |
| | Lecture Exam 2 (50 multiple-choice questions on chapters 6, 7, 8, 9, 10) | 100 points |
| | Lecture Exam 3 (50 multiple-choice questions on chapters 11, 12, 13) (Lecture Exam 3 is also your Final Examination) | 100 points |
| | Lab Quizzes 10 points each (10 quizzes) | 100 points |
| | Lab Mid-Term Covers Labs 1 to 5 | 100 points |
| | Lab Final Exam Covers Labs 6 to 10 | 100 points |
| | Cadaver Lab Participation (2, -25 points for each non-participation) | 0 points |
| | TOTAL POINTS: | 600 points |

Letter Grade Breakdown:

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|----------------|---|------------------|------------------|
| — 85% to 100% | A | "Excellent" | 510 — 600 points |
| — 75% to 84.9% | B | "Good" | 450 — 509 points |
| — 65% to 74.9% | C | "Average" | 390 — 449 points |
| — 55% to 64.9% | D | "Poor / Passing" | 330 — 389 points |
| — 0% to 54.9% | F | "Fail" | 0 — 329 points |

There is no rounding of grades, and no curve applied to the class.

There are no extra-credit projects, and no retaking of quizzes or exams.

Tutoring services are usually available each semester, but not guaranteed.

If you are having academic trouble, ask me for help (earlier in the semester is better).

Assignments and Descriptions:

Lecture material is tested by multiple choice exams as noted above. There are no papers to write. Lab begins with a quiz on the previous lab's material followed by a presentation of the new lab material and time to dissect, observe the anatomy, view slides, and go over the relevant anatomy of the cadavers and models. Lab practical exams test on your knowledge of the lab material as noted above.

Tentative Course Outline:

| Week | Day | Date | Lecture & Lab Schedule | Topic |
|------|------------------|---------------------|------------------------------------|--|
| 1 | Monday | August 24 | NO LECTURE | Fall classes do not start till 4 PM on Monday. No lab the 1st week of semester. Introduction to Anatomy Introduction to Anatomy |
| | Tuesday | August 25 | NO LAB | |
| | Wednesday | August 26 | Chapter 1 | |
| | Friday | August 28 | Chapter 1 | |
| 2 | Monday | August 31 | Chapter 1 | Introduction to Anatomy |
| | Tuesday | September 1 | No Quiz Today, Lab 1 | Anatomic Terminology & Introduction to Cadaver Lab. |
| | Wednesday | September 2 | Chapter 2 | Chemistry |
| | Friday | September 4 | Chapter 2 | Chemistry |
| 3 | Monday | September 7 | NO LECTURE | Labor Day |
| | Tuesday | September 8 | Quiz on Lab 1, Lab 2 | Basic Microscope Skills & the Somatic Cell Cycle |
| | Wednesday | September 9 | Chapter 2 | Chemistry |
| | Friday | September 11 | Chapter 3 | Cell Biology |
| 4 | Monday | September 14 | Chapter 3 | Cell Biology |
| | Tuesday | September 15 | Quiz on Lab 2, Lab 3 | Histology Part 1 (Epithelia) |
| | Wednesday | September 16 | Chapter 3 | Cell Biology |
| | Friday | September 18 | Chapter 4 | Histology |
| 5 | Monday | September 21 | NO LECTURE | MSU ASSESSMENT DAY (8 AM to 2:50 PM) |
| | Tuesday | September 22 | Quiz on Lab 3, Lab 4 | Histology Part 2 (Connective, Nervous, Muscle Tissues) |
| | Wednesday | September 23 | Chapter 4 | Histology |
| | Friday | September 25 | Chapter 4 | Histology |
| 6 | Monday | September 28 | Chapter 5 | Integumentary System |
| | Tuesday | September 29 | Quiz on Lab 4, Lab 5 | Integumentary System |
| | Wednesday | September 30 | Chapter 5 | Integumentary System |
| | Friday | October 2 | Chapter 5 | Integumentary System |
| 7 | Monday | October 5 | Lecture EXAM 1 | Covers Chapters 1, 2, 3, 4, 5. Covers Labs 1, 2, 3, 4, 5. Bone Histology Bone Histology |
| | Tuesday | October 6 | LAB Midterm EXAM | |
| | Wednesday | October 7 | Chapter 6 | |
| | Friday | October 9 | Chapter 6 | |
| 8 | Monday | October 12 | Chapter 6 | Bone Histology |
| | Tuesday | October 13 | Quiz on Lab 5, Lab 6 | Bone Histology & Appendicular Skeleton. |
| | Wednesday | October 14 | Chapter 7 | Axial Skeleton |
| | Friday | October 16 | Chapter 7 | Axial Skeleton |
| 9 | Monday | October 19 | Chapter 7 | Axial Skeleton |
| | Tuesday | October 20 | Quiz on Lab 6, Lab 7 | Axial Skeleton |
| | Wednesday | October 21 | Chapter 8 | Appendicular Skeleton |
| | Friday | October 23 | Chapter 8 | Appendicular Skeleton |
| 10 | Monday | October 26 | Chapter 8 & 9 | Appendicular Skeleton & Joints |
| | Tuesday | October 27 | Quiz on Lab 7, Lab 8 | Muscles Part 1 |
| | Wednesday | October 28 | Chapter 9 | Joints |
| | Friday | October 30 | Chapter 9 | Joints |
| 11 | Monday | November 2 | Chapter 10 | Muscle Histology |
| | Tuesday | November 3 | Quiz on Lab 8, Lab 9 | Muscles Part 2 |
| | Wednesday | November 4 | Chapter 10 | Muscle Histology |
| | Friday | November 6 | Chapter 10 | Muscle Histology |
| 12 | Monday | November 9 | Lecture EXAM 2 | Covers Chapters 6, 7, 8, 9, 10. Brain & Spinal Cord VETERANS DAY The Muscles |
| | Tuesday | November 10 | Quiz on Lab 9, Lab 10 | |
| | Wednesday | November 11 | NO LECTURE | |
| | Friday | November 13 | Chapter 11 | |
| 13 | Monday | November 16 | Chapter 11 | The Muscles |
| | Tuesday | November 17 | Quiz on Lab 10. | Extra Dissection Time as needed. |
| | Wednesday | November 18 | Chapter 11 | The Muscles |
| | Friday | November 20 | Chapter 12 | Nervous System Histology |
| 14 | Monday | November 23 | Chapter 12 | Nervous System Histology |
| | Tuesday | November 24 | NO LAB | Thanksgiving Break |
| | Wednesday | November 25 | NO LECTURE | Thanksgiving Break |
| | Friday | November 27 | NO LECTURE | Thanksgiving Break |
| 15 | Monday | November 30 | Chapter 12 | Nervous System Histology |
| | Tuesday | December 1 | LAB FINAL EXAM | Covers Labs 6, 7, 8, 9, 10. |
| | Wednesday | December 2 | Chapter 12 | Nervous System Histology |
| | Friday | December 4 | Chapter 13 | Anatomy of the CNS & PNS |
| 16 | Monday | December 7 | Chapter 13 | Anatomy of the CNS & PNS |
| | Tuesday | December 8 | NO LAB | Dissection Time as needed. |
| | Wednesday | December 9 | Chapter 13 | Anatomy of the CNS & PNS |
| | Friday | December 11 | Chapter 13 | Anatomy of the CNS & PNS |
| 17 | TUESDAY | December 15 | Lecture EXAM 3 (FINAL EXAM) | Covers Chapters 11, 12, 13 (Time: 12 PM to 1:50 PM). |

You must participate in 2 cadaver dissections during the semester. Participation is required and will be explained in lab. 25 points will be deducted from your final point total for each dissection missed (max of 50 points can be deducted).

Tentative Dues Dates of Major Assignments: See the Tentative course outline for the dates and topics of each quiz or exam.

POLICIES

- Late and Missed Work Policy:** If you have a schedule conflict (MSU sanctioned sports event, planned surgery, pregnancy, doctor's appointments, etc....), tell me (*if possible*) BEFORE the exam or ASAP by email so we can plan another testing time. If you are sick, go see a doctor first and talk to me later about make up work. Be prepared that makeup exams will likely not be the same format as listed below (i.e. fill in the blank, essay, or other kind of test of my choice). Ideally, all makeup lecture and lab exams will be done within a week of the one on the schedule.
- Attendance Policy:** I follow the Minot State University Attendance Policy that can be found at <http://www.minotstateu.edu/records/pages/policy-class-attendance.shtml>
You are expected to attend all lectures and lab. As a courtesy, please email me if you are going to miss lecture or lab.
- University Sanctioned Events Policy:** Minot State University has a commitment to students who represent the University in official capacities. University-sanctioned activities include events that are required or encouraged by a class, program, club, or athletic team. When a student has a scheduled absence due to a university-sanctioned activity, it is the student's responsibility to communicate with the faculty member prior to his or her absence. If your absence occurs during a lab or when a lecture exam is being given, I will work with you to find a time to makeup the quiz or exam you missed. I try to get all missed work completed within 7 days. If the student fails to communicate with me (by email, phone, in-person, etc...) within a week of the missed work, a zero will be scored.
- Academic Honesty Policy with Penalty for Violating the Policy:** I follow the Minot State University Academic Honesty Policy that can be found at: <http://catalog.minotstateu.edu/graduate/policies-regulations/grad-academic-honesty/>
If you are caught cheating on any quiz or exam, a zero will be recorded.
- Disability Statement:** In coordination with the Access Services, reasonable accommodations will be provided for qualified students with disabilities (LD, Orthopedic, Hearing, Visual, Speech, Psychological, ADD/ADHD, Health Related, TBI, PTSD and Other). Please meet with the instructor during the first week of class to make arrangements. Accommodations and alternative format print materials (large print, audio, disk or Braille) are available through the Access Services, in person, by phone 701-858-3371 or by e-mail at evelyn.klimpel@minotstateu.edu.
- Non-discrimination Statement:** Minot State University subscribes to the principles and laws of the state of North Dakota and the federal government pertaining to civil rights and equal opportunity, including Title IX of the 1972 Education Amendments. Minot State University policy prohibits discrimination on the basis of race, gender, religion, age, color, creed, national or ethnic origin, marital status, sexual orientation, gender identity, or disability in the recruitment and admission of students and the employment of faculty, staff, and students, and in the operation of all college programs, activities, and services. Evidence of practices which are inconsistent with this policy should be reported using the Student Complaint and Anti-Discrimination Form located here: <https://form.jotform.com/72996849416981>. For the complete non-discrimination statement, visit [here](#).

Title IX Statement:

MSU faculty members are “mandatory reporters,” which means that once we are apprised of violence or harassment based on sex and gender, we are required to report the incident to the Title IX office on campus, regardless of whether the student wants this information reported or not. It may very well be that you would like the information reported, but you do not know whom to approach about this information, in which case our mandatory reporting requirements will be desirable to you. However, if you just wanted to talk about an incident but do not want it reported, neither you nor I have any choice in this matter, and once divulged, I must report it. This Office for Civil Rights.

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to accountability and support. If you or someone you know has been harassed on the basis of sex and gender or assaulted, you can find the appropriate resources on/off Minot State University’s campus.

Contact Information:

Lisa Dooley| Title IX coordinator
Minot State University |Memorial 412
500 University Ave W | Minot, ND 58707
Ph: 701.858.3447 | lisa.dooley@NDUS.edu
[Title IX Resources](#)
[Reporting Forms](#)

IMPORTANT DATES

Assessment Day:

**Monday September 21 MSU Assessment Day from 8 AM to 2:50 PM
(No Lecture is scheduled for this day)**

Final Exam Date and Time:

See tentative calendar above for the full details of what is on each exam:
Tuesday December 1 LAB FINAL EXAM (time of exam by lab section)
Tuesday December 15 Lecture Final (Exam 3) 12 PM - 1:50 PM.

Human Cadaver Lab Rules:

There are some very specific rules regarding your experience in the the cadaver lab.

- a. Due to grouped activities in lab, and just 2 cadavers that need to last a year, it is absolutely necessary that you attend the lab section you are registered for. Remember, that any missed quizzes or exams can not be made up unless you follow the rules mentioned above. **It is best not to miss anything.** Quizzes are based on the previous lab's material. I will let you know what that material is when you come to lab. Do not expect to get a chance to take the quiz later in the lab if you show up more than a few minutes late.
- b. You will do dissections of both animal organs and full human cadavers. While the animal dissections always go along with the new material presented each week, due to the sequence of how a cadaver is dissected some of the cadaver dissection material may not correlate till later in the semester. I will let you know if we have identified something from one of the cadavers from a previous dissection in the first half of the lab. This "mis-alignment" of what you are dissecting and what you are studying is really only present for the first half of the lab, towards the end... all of the lab stuff will be in sync.
- c. **YOU WILL BE GRADED AND RESPONSIBLE FOR PARTICIPATING IN 2 DISSECTIONS. You must participate to pass, but there are "participation options" for those who do not want to cut or even touch the cadavers. At a minimum, you must be able to look at the cadavers, or else you might need to drop the course. The dissection participation options will be explained in lab, and there will be a sign up sheet posted in the lab for each lab section. The location to be dissected is decided by Dr. Ament from week to week based on the progress already made.**
- d. **Photography, or video of the human cadavers of any kind, as well as mishandling, or disrespecting the human tissue are grounds for immediate failure of the course. In addition, you will NOT be eligible to take this course again in the future.**
- e. Usually a handout with the assigned information for that week will also be provided, or I will write materials to be learned on the whiteboard in lab. These handouts are just to help you with note taking, they are NOT for turning in as a grade. Copies (if you lose it) will be posted to the class website.
- f. **NO open shoes, NO flip-flops, NO sandals are allowed in the cadaver lab. If I can see the skin on your toes, you can NOT go in the cadaver lab area of the room.**
- g. You must wear a lab coat and gloves to work with the cadavers. If you were only participating with documenting and navigating the dissection versus doing the actual dissecting, you can return your lab coat to the "clean" area. Dissecting students will put their lab coats into the laundry basket in the cadaver lab.
- h. The window blinds to Swain 306 will be CLOSED when the cadaver lab blinds are open to prevent people in the hall from seeing the cadavers.
- i. Put all loose fat, connective tissue and removed skin as instructed into the correct bins. NEVER remove any cadaver tissue from the cadaver lab. NEVER mix or move one cadaver's tissue with the other one. All tissues from each cadaver are kept separate.
- j. Wash the tools in the sink with soap and water when you are done, and put them in the drying tray.
- k. ALWAYS document your group's dissection in the correct log with each lab. This is part of your grade.
- l. No food or beverages in the cadaver lab.
- m. **NO person is to be admitted into the cadaver lab without staff approval. If the visit serves no academic purpose, the request to view the cadavers will be denied.**