



BASIC COURSE INFORMATION

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| Course Prefix, Number, and Title: | BIOL 221-1 (03944) BIOL 221-3 (04026) | Human Anatomy & Physiology: Part 2 Human Anatomy & Physiology: Part 2 |
| Credits: | Unit Hours/Credits: 4 units/credits Classroom study hours (CS): 3 hours Laboratory/Clinical hours (L/C): 3 hours | |
| Meeting Days and Times: | MWF Lecture 1:00 PM to 1:50 PM Wednesday LAB (sec-1) 10:00 AM to 12:50 PM Wednesday LAB (sec-3) 2:00 PM to 4:50 PM | Memorial Hall 114 Swain Hall Room 306 Swain Hall Room 306 |
| Semester/Year: | Spring Semester 2021 | |
| Course Dates in Campus Connection: | 16-week (spring semester) January 11, 2021 to May 14, 2021 . | |
| Mode of Delivery: | face-to-face | |
| Location: | Lecture: Memorial Hall Room 114. 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: 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 special senses, endocrine system, blood, cardiovascular system, lymphatic system, immune system, respiratory system, gastrointestinal system, metabolism, urinary system, fluids & electrolytes, reproductive system, and pregnancy. |
| 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 221 is known to fill quickly. |
| Prerequisite/Co-requisite Courses: | BIOL 220 is the prerequisite for BIOL 221. |

General Education Category (or Categories): BIOL 221 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 221 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 221

Course Objectives: As a result of taking BIOL 221 you will cover part 2 of 2 courses covering human anatomy and physiology. The individual learning outcomes of BIOL 221 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 14, 17, 18, 19) | 100 points |
| | Lecture Exam 2 (50 multiple-choice questions on chapters 20, 21, 22, 23) | 100 points |
| | Lecture Exam 3 (50 multiple-choice questions on chapters 25, 26, 27, 28) (Lecture Exam 3 is also your Final Examination) | 100 points |
| | Lab Quizzes 10 points each (Lowest Grade Dropped, 11 quizzes) | 100 points |
| | Lab Mid-Term Covers Labs 1 to 6 | 100 points |
| | Lab Final Exam Covers Labs 7 to 11 | 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:

MWF
Wednesday
Wednesday

Lecture 1:00 PM to 1:50 PM
LAB (sec-1) 10:00 AM to 12:50 PM
LAB (sec-3) 2:00 PM to 4:50 PM

Memorial Hall 114
 Swain Hall Room 306
 Swain Hall Room 306

| <u>Week</u> | <u>Day of the Week</u> | <u>Date</u> | <u>Lecture & Lab Schedule</u> | <u>Topic</u> |
|-------------|---|---|---|---|
| 1 | Monday Wednesday Wednesday Friday | January 11 January 13 January 13 January 15 | No Lecture (Spring classes officially begin at 4 PM on Monday) Chapter 14 No Lab the first week of the Spring Semester. Chapter 14 | Special Senses Special Senses |
| 2 | Monday Wednesday Wednesday Friday | January 18 January 20 January 20 January 22 | No Lecture (Dr. Martin Luther King Jr. Day) Chapter 14 Lab 1 Chapter 14 | Special Senses Eye Special Senses |
| 3 | Monday Wednesday Wednesday Friday | January 25 January 27 January 27 January 29 | Chapter 14 Chapter 14 Quiz on Lab 1 then Lab 2 Chapter 17 | Special Senses Special Senses Nose, Tongue, Ear Endocrine System |
| 4 | Monday Wednesday Wednesday Friday | February 1 February 3 February 3 February 5 | Chapter 17 Chapter 17 Quiz on Lab 2 then Lab 3 Chapter 18 | Endocrine System Endocrine System Blood Blood |
| 5 | Monday Wednesday Wednesday Friday | February 8 February 10 February 10 February 12 | Chapter 18 Chapter 18 Quiz on Lab 3 then Lab 4 Chapter 19 | Blood Blood Heart Heart |
| 6 | Monday Tuesday Wednesday Wednesday Friday | February 15 February 16 February 17 February 17 February 19 | No Lecture (President's Day) Assessment Day (does not affect BIOL 221) Chapter 19 Quiz on Lab 4 then Lab 5 Chapter 19 | Heart Arteries Heart |
| 7 | Monday Wednesday Wednesday Friday | February 22 February 24 February 24 February 26 | Lecture EXAM 1 Chapter 20 Quiz on Lab 5 then Lab 6 Chapter 20 | Covers Chapters 14, 17, 18, 19. Vessels Veins Vessels |
| 8 | Monday Wednesday Wednesday Friday | March 1 March 3 March 3 March 5 | Chapter 20 Chapter 21 Lab Mid-Term Exam Chapter 21 | Vessels Lymphatic & Immune System Covers Labs 1, 2, 3, 4, 5, 6. Lymphatic & Immune System |
| 9 | Monday Wednesday Wednesday Friday | March 8 March 10 March 10 March 12 | Chapter 21 Chapter 21 Quiz on Lab 6 then Lab 7 Chapter 22 | Lymphatic & Immune System Lymphatic & Immune System Respiratory System Respiratory System |
| 10 | Monday Tuesday Wednesday Thursday Friday | March 15 March 16 March 17 March 18 March 19 | MSU Spring Break MSU Spring Break MSU Spring Break MSU Spring Break MSU Spring Break | |

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| 11 | Monday Wednesday Wednesday Friday | March 22 March 24 March 24 March 26 | Chapter 22 Chapter 22 Quiz on Lab 7 then Lab 8 Chapter 23 | Respiratory System Respiratory System Digestive System Histology Digestive System |
| 12 | Monday Wednesday Wednesday Friday | March 29 March 31 March 31 April 2 | Chapter 23 Chapter 23 Quiz on Lab 8 then Lab 9 No Lecture (Easter Break) | Digestive System Digestive System Digestive System Gross Anatomy |
| 13 | Monday Wednesday Wednesday Friday | April 5 April 7 April 7 April 9 | No Lecture (Easter Break) Chapter 23 Quiz on Lab 9 then Lab 10 Lecture EXAM 2 | Digestive System Urinary System Covers Chapters 20, 21, 22, 23. |
| 14 | Monday Wednesday Wednesday Friday | April 12 April 14 April 14 April 16 | Chapter 25 Chapter 25 Quiz on Lab 10 then Lab 11 Chapter 25 | Urinary System Urinary System Male Reproductive System Urinary System |
| 15 | Monday Wednesday Wednesday Friday | April 19 April 21 April 21 April 23 | Chapter 26 Chapter 26 Quiz on Lab 11 then Lab 12 Chapter 26 | Fluids & Electrolytes Fluids & Electrolytes Female Reproductive System Fluids & Electrolytes |
| 16 | Monday Wednesday Wednesday Friday | April 26 April 28 April 28 April 30 | Chapter 27 Chapter 27 Lab Final Exam Chapter 27 | Reproductive System Reproductive System Covers Labs 7, 8, 9, 10, 11, 12. Reproductive System |
| 17 | Monday Wednesday Wednesday Friday | May 3 May 5 May 5 May 7 | Chapter 28 Chapter 28 <i>No Lab Scheduled</i> Chapter 28 | Pregnancy Pregnancy <i>(makeup time as needed)</i> Pregnancy |
| 18 | Wednesday | May 12 | Lecture Exam 3 | Final Exam Covers Chapters 25, 26, 27, 28. Exam Time: 12:00 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 you 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:

**Tuesday February 16 MSU Assessment Day from 8 AM to 2:50 PM
(This course is not affected by Assessment Day)**

Final Exam Date and Time:

See tentative calendar above for the full details of what is on each exam:

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| Wednesday | April 28 (BIOL 220-1) | 10 AM to 12:50 PM | LAB Final Exam |
| Wednesday | April 28 (BIOL 220-3) | 2 PM to 4:50 PM | LAB Final Exam |
| Wednesday | May 12 (all sections) | 12 PM to 1:50 PM | Lecture Final Exam |

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.**