



BASIC COURSE INFORMATION

Course Prefix, Number, and Title:	BIOL 221-1 (02768) BIOL 221-3 (02769)	Human Anatomy & Physiology: Part 2 Human Anatomy & Physiology: Part 2	
Credits:	Unit Hours/Credits: Classroom study hours (CS): Laboratory/Clinical hours (L/C):	4 units/credits 3 hours 3 hours	
Meeting Days and Times:	Monday Wednesday Thursday Thursday Friday	Lecture 10:00 AM to 10:50 AM Lecture 10:00 AM to 10:50 AM LAB (sec-1) 1:00 PM to 3:50 PM LAB (sec-3) 10:00 AM to 12:50 PM Lecture 10:00 AM to 10:50 AM	Moore Hall Room 16 Moore Hall Room 16 Swain Hall Room 306 Swain Hall Room 306 Moore Hall Room 16
Semester/Year:	Fall Semester 2019		
Course Dates in Campus Connection:	16-week (fall semester) August 26, 2019 to December 20, 2019.		
Mode of Delivery:	face-to-face		
Location:	Lecture: Lab:	Moore Hall Room 16. Swain Hall Room 306.	Minot State University Minot State University

INSTRUCTOR INFORMATION

Name(s) of Faculty Member(s):	Aaron L. Ament, M.Sc., M.D. Lori S. Ihli, B.S., B.A, B.S. Ed.	(Instructor for Lecture) (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: Email: Website:	(701) 240-3373 aaron.ament@ndus.edu lori.ihli@ndus.edu www.amentanatomy.com

ADDITIONAL COURSE INFORMATION

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

Grading Policy and Scale:	Lecture Exam #1	Covers Chapters 14, 17, 18, 19	100 points	
	Lecture Exam #2	Covers Chapters 20, 21, 22, 23	100 points	
	Lecture Exam #3	Covers Chapters 25, 26, 27, 28	100 points	
	Lab Quizzes	10 points each (11 total, lowest quiz dropped)	100 points	
	Lab Mid-Term	Covers Labs 1 to 6	100 points	
	Lab Final Practical	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:

— 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	26	NO LECTURE	Fall classes do not start till 4 PM on Monday. Somatic Nervous System (Special Senses) No lab the 1st week of semester. Somatic Nervous System (Special Senses)
	Wednesday	August	28	Chapter 14	
	Thursday	August	29	NO LAB	
	Friday	August	30	Chapter 14	
2	Monday	September	2	NO LECTURE	Labor Day Somatic Nervous System (Special Senses) The Eye, Cadaver Intro. Somatic Nervous System (Special Senses)
	Wednesday	September	4	Chapter 14	
	Thursday	September	5	Lab 1	
	Friday	September	6	Chapter 14	
3	Monday	September	9	Chapter 17	Endocrine System Endocrine System Hearing, Equilibrium, and Taste. Dissection. Endocrine System
	Wednesday	September	11	Chapter 17	
	Thursday	September	12	Lab 1 Quiz followed by Lab 2	
	Friday	September	13	Chapter 17	
4	Monday	September	16	Chapter 18	Blood Blood Blood. Dissection. Blood
	Wednesday	September	18	Chapter 18	
	Thursday	September	19	Lab 2 Quiz followed by Lab 3	
	Friday	September	20	Chapter 18	
5	Monday	September	23	NO Lecture	Assessment Day Heart Heart & its vessels. Dissection. Heart
	Wednesday	September	25	Chapter 19	
	Thursday	September	26	Lab 3 Quiz followed by Lab 4	
	Friday	September	27	Chapter 19	
6	Monday	September	30	Chapter 19	Heart Covers Lectures on Chapters 14, 17, 18, 19 Arteries. Dissection. Vessels and Circulation
	Wednesday	October	2	Lecture EXAM 1	
	Thursday	October	3	Lab 4 Quiz followed by Lab 5	
	Friday	October	4	Chapter 20	
7	Monday	October	7	Chapter 20	Vessels and Circulation Vessels and Circulation Veins. Dissection. The Lymphatic and Immune Systems
	Wednesday	October	9	Chapter 20	
	Thursday	October	10	Lab 5 Quiz followed by Lab 6	
	Friday	October	11	Chapter 21	
8	Monday	October	14	Chapter 21	The Lymphatic and Immune Systems The Lymphatic and Immune Systems Covers Labs 1 through 6 The Lymphatic and Immune Systems
	Wednesday	October	16	Chapter 21	
	Thursday	October	17	LAB MID-TERM EXAM	
	Friday	October	18	Chapter 21	
9	Monday	October	21	Chapter 22	Respiratory System Respiratory System Respiratory System. Dissection. Respiratory System
	Wednesday	October	23	Chapter 22	
	Thursday	October	24	Lab 6 Quiz followed by Lab 7	
	Friday	October	25	Chapter 22	
10	Monday	October	28	Chapter 22	Respiratory System Digestive System Digestive System. Dissection. Digestive System
	Wednesday	October	30	Chapter 23	
	Thursday	October	31	Lab 7 Quiz followed by Lab 8	
	Friday	November	1	Chapter 23	
11	Monday	November	4	Chapter 23	Digestive System Digestive System Urinary System. Dissection. Urinary System
	Wednesday	November	6	Chapter 23	
	Thursday	November	7	Lab 8 Quiz followed by Lab 9	
	Friday	November	8	Chapter 25	
12	Monday	November	11	NO Lecture	Veterans Day Covers Lectures on Chapters 20, 21, 22, 23 Male Reproductive System. Dissection. Urinary System
	Wednesday	November	13	Lecture EXAM 2	
	Thursday	November	14	Lab 9 Quiz followed by Lab 10	
	Friday	November	15	Chapter 25	
13	Monday	November	18	Chapter 25	Urinary System Fluids & Electrolytes Female Reproductive System. Dissection. Fluids & Electrolytes
	Wednesday	November	20	Chapter 26	
	Thursday	November	21	Lab 10 Quiz followed by Lab 11	
	Friday	November	22	Chapter 26	
14	Monday	November	25	Chapter 26	Fluids & Electrolytes Thanksgiving Break Thanksgiving Break Thanksgiving Break
	Wednesday	November	27	NO Lecture	
	Thursday	November	28	NO LAB	
	Friday	November	29	NO Lecture	
15	Monday	December	2	Chapter 27	Reproductive System Reproductive System <i>Dissection Time (if needed)</i> Reproductive System
	Wednesday	December	4	Chapter 27	
	Thursday	December	5	Lab 11 Quiz, Review Time	
	Friday	December	6	Chapter 27	
16	Monday	December	9	Chapter 28	Pregnancy, Fetal Development & Inheritance Pregnancy, Fetal Development & Inheritance Covers Labs 7 to 11 Pregnancy, Fetal Development & Inheritance
	Wednesday	December	11	Chapter 28	
	Thursday	December	12	LAB FINAL EXAM	
	Friday	December	13	Chapter 28	
17	Wednesday	December	18	Lecture Exam 3 (FINAL EXAM)	Covers Lectures on Chapters 25, 26, 27, 28

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, exam and lab practical.

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:

Monday September 23 NO Lecture held on Assessment Day

Final Exam Date and Time:

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

Thursday December 12 LAB FINAL EXAM

Wednesday December 18 Lecture Exam 3 (FINAL EXAM) 10 AM to 11:50 AM

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.**