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Office Hours: Monday 9am to 11am and Friday 9am-11am, or by appointment. 
Prerequisite: Successful completion of Biol 227 or equivalent is a required pre-requisite for this course, or previous instructor approval. I expect you to have a detailed knowledge of cytology and histology presented in Biol 227 as you come into this course. I will build on these fundamentals this semester.

Textbook: Required Lecture Textbook/ISBN: This course will be using the eBook “Anatomy and Physiology – The Unity of Form and Function” 9th Edition by Dr. Kenneth Saladin with an online program from McGraw-Hill called “Connect”. The link to the eBook and program will be available in Canvas and I will post instructions on how to register for “Connect” and access all course materials from “Connect” on Canvas. You may also purchase a loose-leaf copy of the textbook from McGraw-Hill if you would like to have a physical copy of the text. 

You have been registered for this course through UI registration. Your textbook and other learning resources are all linked directly in this course on Canvas to ensure you have the correct course materials on the first day of class, and at a much lower cost. The charge for your lecture eBook and digital materials goes directly to your UI account, making it eligible for Financial Aid. Also, you have the option to purchase a loose-leaf printed version of the text once you have registered for “Connect” for a small fee. Because you are enrolled, simply log-in to your Canvas course and follow the instructions under the module entitled “McGraw Hill Connect” to learn how to access all your digital resources. I will do a quick tutorial on where to find important course material on Canvas on the first day of lecture.

Required Lab text: “Laboratory Exercises for Human Anatomy and Physiology, by Candi Heimgartner, published by Morton Publishing, 2020. Diagrams, lecture material and related exam questions may be taken from this text for use during the course. You will be submitting some of the completed assignments in this text throughout this semester as well as additional assignments from “Connect” and other sources

I also recommend use of the supportive material provided with the texts including web access to material, accompanying CDs and atlas. Recommended texts: Van De-Graaff etal. “A Photographic Atlas for the Anatomy and Physiology Laboratory, 6th Ed. I recommend this text for the more visual/diagrammatic learner. For the application type of learner, I recommend “A Visual Analogy Guide to Human Anatomy and Physiology” by Paul Krieger. All of these titles are recommended (but not required) and can be purchased hard copy or ebook access through the UI bookstore.

Course Objectives: This course will provide a basic overview of human anatomy and physiology, with a general approach to cytology, histology, and continuation of body systems discussions leading from Biol 227. (see the lecture and lab outline in this syllabus). For the students pursuing careers in the Allied Health Sciences and Physical Therapy curriculums, this course will be your primary exposure to human anatomy and physiology. It is important to learn how the healthy body is constructed and performs specific physiological functions before you can study how disease and injury impair function. The goal of this course is to provide a fundamental background in human anatomy and physiology to enable you to be successful in an allied health career, as well as future exams and future courses related to human anatomy and physiology. It is important to remember that anatomy is the study of structure and therefore memorization is a key tool that will enable you to
master the material in this course, yet physiology is the study of function, requiring application of anatomy and critical thinking.

**Course Learning Outcomes:** In accordance with UI Learning Outcomes, it is expected that students will:

- **Learn & Integrate:** Students will apply their previous and gained knowledge of the human body to gain a basic understanding of anatomical structures and physiological functions.

- **Think & Create:** Students will be expected to apply the concepts and approaches learned here to solve future anatomical, physiological, and academic problems.

- **Communicate:** Students will be expected to better communicate with others using the vernacular and nomenclature of human anatomy and physiology.

- **Clarify Purpose & Perspective:** It is expected that all students will gain important insights into the human body and the physical world that helps to support anatomical and physiological study.

- **Practice Citizenship:** It is every student’s responsibility to share their knowledge and appreciation of the human body and its anatomical structure and function.

This course is offered in the Department of Biological Sciences, College of Science, University of Idaho, Moscow, Idaho. This course and the instructor will comply will all Federal, State, and University laws, rules, and policies. These include, but are not limited to the following:

- **Face Masks**
  - All faculty, staff, students and visitors across all U of I locations must use face masks whenever indoors at any U of I buildings. You are required to wear a face mask over your nose and mouth indoors at all times. If you have a medical condition that affects your ability to comply with the face covering policy, please contact the Center for Disability Access and Resources (CDAR) to request a reasonable accommodation. Failure to wear a face covering means you will be required to leave the classroom. If a disruption to the learning experience occurs due to repeated offence and/or egregious behavior, it will be referred to the Dean of Students Office for potential code violation.

- **Academic Integrity**
  - I will not tolerate any form of cheating in this course, either in lecture or lab or in online work. Any individual that is observed cheating by the teaching assistants or myself will be dealt with according to the university regulations.

- **Students with Disabilities/Disabilities Support Services**
  - Reasonable accommodations are available for students who have documented temporary or permanent disabilities. All accommodations must be approved through the Center for Disability and Academic Resources located in the Bruce Pitman Center in order to notify your instructor(s) as soon as possible regarding accommodation(s) needed for the course. An individual study and examination plan will be developed between the student, instructor and CDAR.

- **Classroom Civility**
  - In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students,
instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning. Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern. Additional resources for expression of concern or requesting support include the Dean of Students office and staff (5-6757), the UI Counseling & Testing Center’s confidential services (5-6716), or the UI Office of Human Rights, Access, & Inclusion (5-4285).

- Family Educational Rights and Privacy Act (FERPA)
- Emergency Management
- Weapons
  - "The University of Idaho bans firearms from its property with only limited exceptions. One exception applies to persons who hold a valid Idaho enhanced concealed carry license, provided those firearms remain concealed at all times. If an enhanced concealed carry license holder’s firearm is displayed, other than in necessary self-defense, it is a violation of University policy. Please contact local law enforcement (call 911) to report firearms on University property."

Students are expected to adhere to the University of Idaho Student Code of Conduct. If you have any questions or concerns regarding these topics, please contact the administrative offices of the University of Idaho. [http://www.uidaho.edu/about/administration](http://www.uidaho.edu/about/administration)

**Exams and Grading:** This course is designed around a 50 minute lecture three times a week as well as an associated laboratory portion of one 3 hour session per week. The lecture will present material related to microscopic and cellular anatomy and physiology while the lab will be used to demonstrate these structures and functions and present anatomical structures in a hands on environment. Remember, topics overlap, so you may see both lecture and lab assignments containing similar questions. This will help you better understand the material from several different approaches.

Your grade in this course will be based on: five multiple choice lecture exams worth 100 points each, four lab exams, which may vary in points from 40-100 pts each, various online quizzes and/or homework, lab assignments and quizzes, etc. I will strive to have approximately 1000 total points for this course, but this may vary as resources for instruction allow. Extra credit opportunities will be provided both on Connect and in class/lab. These will be announced in class and on Canvas and will be used to determine student scores/final grades at the end of the semester only.

Due to the nature of human anatomy and physiology, each lecture exam is considered comprehensive. This means that in order to understand how the heart is comprised and functions, you must have a solid background in cellular anatomy and physiology.

In order to reschedule an exam, you MUST have an official university excused absence. This is limited to athletic travel and Dean of Students recommended absences ONLY. See your student handbook for official descriptions of excused absences. If you need to miss an exam for ANY other reason, this is your choice, but you will receive a zero for this exam. If you have any questions about this policy or know of an excused absence during an exam time, you MUST contact me at least ONE WEEK BEFORE to the scheduled exam. Not showing up for an exam means that you earn a zero. Any rescheduled exams time and format will be at the discretion of the instructor. ONLY ONE documented reschedule is allowed. If you are unable to attend the rescheduled time, you will earn a zero for that exam.

If you think that your exam was incorrectly graded, you must submit your concern to me IN WRITING no more than three class days following the exam. I will NOT entertain verbal requests for additional points, but I would be happy to recheck your exam if you submit your request in writing in a timely manner. Grading concerns must be typed, in a memo format and contain the original question and answer choices as well as an explanation of the concern. These will be returned following the submission deadline for each exam. Grading concerns may NOT be submitted via e-mail. Writing assignments, online assignments, and quizzes are exempt from this grading concern submission policy.
Any subsequent concerns or policies concerning grading and exams may be found in your student handbook and corresponding catalog for reference. These publications will be referred to concerning any other aspects of examinations and student grades.

**Attendance:** I expect you to, and highly recommend, that you attend lecture regularly and lab attendance is required. If there are course point opportunities (exams, quizzes, in class assignments, etc.) given in your absence, you will receive NO points that day and you will NOT be allowed to make up those points if your absence is considered unexcused. Excused absences, as stated previously, involve sanctioned UI athletic travel, or Dean of Student documentation ONLY.

**Lab Fees and Policies:** Lab fees may be reimbursed only if the course is dropped within the first two weeks of the semester. A credit to your account will automatically be processed by Accounting Services.

**Cell Phone and Computer Use:** Cell phone use during lecture sessions is prohibited. All cell phones must be turned off and stored prior to entering the lecture hall. Failure to do so may constitute your dismissal from the course or a failing grade. Portable computers may be used in lecture for course material ONLY! Any unauthorized use of portable computers during lecture may constitute your removal from the course or a failing grade. NO cell phone use or photography is allowed in the laboratory and this will be STRICTLY enforced.

**Suggestions for Success:** This course is very fast paced and integrated. It is therefore very important that you keep up with study of the material. If you fall behind, I suggest dropping the course. It is extremely difficult to catch up in a course that builds on presented topics throughout the semester.

I suggest reading the chapter summaries before attending the lecture on the material. Don’t worry about the details in the chapter, we will cover those in lecture. After attending the presentation, I suggest THEN reading the chapter front to back, reviewing your lecture notes at the same time. Highlight or otherwise note key concepts during this phase of study. The following day, review these key concepts and incorporate the new material. In this manner, you will be able to simply review the key concepts the day before the exam since you have seen them everyday prior!

I will post the PowerPoint slides online before each lecture. You may print these slides at your convenience to use during the lecture presentation or access these on your device during the lecture. I suggest using all your course materials interchangeably. Your lecture materials and text are excellent resources for detailed study of a topic, while your lab materials provide a concise overview and summary of the topics. As mentioned previously, online homework and lab assignments and quizzes may contain very similar questions to better help you understand a specific topic. I will do my best to coordinate topics between lecture and lab as much as possible to help you gain more complete understanding of the topics.

There are many resources available for you to better learn the material. Please ask about these BEFORE you fall behind! Your lab coordinators and myself are available at most any time to answer your questions and to help you better understand the concepts. The TAAP is a huge resource for students. They offer group tutors, one-on-one tutors for specific students, drop in tutor hours in the library, college success and study coaches, and supplemental instruction sessions. Your supplemental instructor leader will be introduced the first day of class along with times of SI Sessions. Get involved in these early! Don’t wait until you are behind or right before an exam!
BIOLOGY 228
TENTATIVE LECTURE AND LAB SCHEDULE

This is a TENTATIVE schedule and is subject to change. Any announcements made in lecture, lab or posted on Canvas will take precedence and will override the tentative schedule listed below.

WEEK 1 (Starting Jan. 10th)
LAB No Labs this week as Classes begin mid-week

LECTURE

- Wednesday 1/12 – Syllabus and Course Introduction and Course Policies
- Chapter 19 – Introduction to the Cardiovascular System – The Heart
- Friday 1/14 – Chapter 19 Histology of the Heart

WEEK 2 (Starting Jan. 17th)
DUE Monday 1/17 6:00am
- No Materials Due

LAB Exercise 25 – Cardiovascular System – The Heart Anatomy and Histology

LECTURE

- Monday 1/17 – Human Rights Day – NO CLASSES
- Wednesday 1/19 – Chapter 19 – Cardiovascular Physiology – EKG/Cardiac Output
- Friday 1/21 – Chapter 19 – Control of Cardiac Output

WEEK 3 (Starting Jan. 24th)
DUE Monday 1/24 6:00am
- Connect Quiz – Chap. 19-1 (Heart Anatomy) AND Chap. 19-2 (Heart Physiology)

LAB Quiz 1 (Exercise 25)
- Exercise 26 – The Electrical Signals of the Heart and the EKG
- Exercise 24 – CV System – Blood Vessels

LECTURE

- Monday 1/24 – Chapter 20 – Blood Vessel Anatomy and Histology
- Wednesday 1/26 – Chapter 20 – Variations in BV Histology
- Friday 1/28 – LECTURE EXAM I – Chapter 19 and portions of Chapter 20

WEEK 4 (Starting Jan. 31st)
DUE Monday 1/31 6:00am
- Lab Homework Activity Online – Blood Vessel Homework

LAB Quiz 2 (Exercise 26 and 24)
- Exercise 27 – Blood and Hemo-analysis

LECTURE

- Monday 1/31 – Chapter 22 – Review of Pulmonary Circuit/Partial Pressures and Gas Transport
- Wednesday 2/2 – Chapter 20 – Capillary Exchange Mechanisms
- Friday 2/4 – Chapter 20 – Control of Capillary Exchange
WEEK 5 (Starting Feb. 7th)
DUE Monday 2/7 6:00am
Connect Quiz – Chap. 20/22 (Capillary Exchange and Gas Transport)
Lab Homework Activity Online – Blood and Hemo-analysis Homework

LAB LAB EXAM I (100 pts) – Exercises 24-27

LECTURE          Monday 2/7 – Chapter 20 – Blood Pressure
                 Wednesday 2/9 – Chapter 20 – Blood Pressure Measurements and Control
                 Friday 2/11 – Chapter 13 – Introduction to the Spinal Cord

WEEK 6 (Starting Feb. 14th)
DUE Monday 2/14 6:00am
Connect Quiz – Chap. 20-BP

LAB Exercise 28 – The Physiology of Blood Pressure
Exercise 16 – Introduction to the Spinal Cord and Spinal Nerves

LECTURE          Monday 2/14 – Chapter 13 – Spinal Nerves and Reflexes
                 Wednesday 2/16 – LECTURE EXAM II - Portions of Chapters 20 and 22; Chapter 13
                 Friday 2/18 – LECTURE CANCELLED

WEEK 7 (Starting Feb. 21st)
DUE Monday 2/21 6:00am
Connect Quiz – Chap. 13 (Spinal Cord and Reflexes)

LAB Quiz 3 (Exercises 28 and 16)
Exercise 18 – Memory and Learning (also reference portions of Saladin Chapter 12)

LECTURE          Monday 2/21 - President’s Day – NO CLASSES
                 Wednesday 2/23 – Chapter 14 – Introduction to Brain – Brain Stem and Cerebellum
                 Friday 2/25 – Chapter 14 – The Diencephalon and Basal Ganglia

WEEK 8 (Starting Feb. 28th)
DUE Monday 2/28 6:00am
Connect Quiz – Chap. 14-1 (Brain Regions Outside the Cerebrum)

LAB LAB EXAM II – (75 pts) - Exercises 28, 16, 18 (Includes a BP Practical 10 pts)

LECTURE          Monday 2/28 - Chapter 14 – The Cerebrum
                 Wednesday 3/2 – Chapter 14 – Association Areas/EEG/Sleep/Language
                 Friday 3/4 – Chapter 14 – Motor Control Pathways

WEEK 9 Starting Mar. 7th)
DUE Monday 3/7 6:00am
Connect Quiz – Chap. 14-2 (The Cerebrum; Brain Physiology)

LAB Exercise 17 – The Brain and Cranial Nerves

LECTURE          Monday 3/7 – Chapter 12 – Review of Synapses/Post Synaptic Potentials
                 Wednesday 3/9 – Chapter 12 – EPSPs/IPSPS/Summation
                 Friday 3/11 – Chapter 15 – Introduction to the ANS
WEEK 10 (Starting Mar. 14th)
SPRING BREAK - NO CLASSES OR LABS
Due Monday 3/14 6:00am
No Materials Due

WEEK 11 (Starting Mar. 21st)
Due Monday 3/21 6:00am
Connect Quiz – Chap. 14 -3 (Cranial Nerves) AND Chap. 12 (Synapses and Summation)
LAB Quiz 4 (Exercise 17)
Exercise 14 – Skeletal Muscle Action Potentials and Muscle Fatigue
LECTURE
Monday 3/21 – Chapter 15 – Dual Innervation
Wednesday 3/23 – Review Topics/Q&A For Lecture Exam III
Friday 3/25 – LECTURE EXAM III (Chapters 14, 12, and 15)

WEEK 12 (Starting Mar. 28th)
DUE Monday 3/28 6:00am
Connect Quiz – Chap. 15 (The ANS)
LAB LAB EXAM III (50 pts) – Exercises 17 and 14
LECTURE
Monday 3/28 – Chapter 25 – Introduction to the Digestive System
Wednesday 3/30 – Chapter 25 – The Oral Cavity/Eosophagus/Stomach
Friday 4/1 – Chapter 25 – The Intestines

WEEK 13 (Starting Apr. 4th)
DUE Monday 4/4 6:00am
Connect Quiz – Chap. 25-1 (Digestive Tract)
LAB Exercise 31 – The Digestive System
LECTURE
Monday 4/4 – Chapter 25 – Digestive Accessory Organs
Wednesday 4/6 - Chapter 25 – Coordinated Digestive Physiology
Friday 4/8 – Chapter 23 – Introduction to the Urinary System – The Kidney

WEEK 14 (Starting Apr. 11th)
DUE Monday 4/11 6:00am
Connect Quiz - Chap. 25-2 (Digestive Accessory Organs; Digestive Physiology)
LAB Quiz 5 (Exercise 31)
Exercise 32 – Introduction to the Urinary System (Anatomy)
LECTURE
Monday 4/11 – Chapter 23 – The GFR and Renal Physiology
Wednesday 4/13 – Chapter 23 – Tubular Reabsorption and Secretion
Friday 4/15 – Chapter 23 – A&P of the Ureter, Bladder, Urethra, Micturition
WEEK 15 (Starting Apr. 18th)
DUE Monday 4/18 6:00am
  Connect Quiz – Chap. 23 (A&P of the Urinary System)

LAB Quiz 6 (Exercises 32)
  Exercise 33 – Urinalysis

LECTURE
  Monday 4/18 – LECTURE EXAM IV (Chapters 25 and 23)
  Wednesday 4/20 – Chapter 16 – Introduction Special Senses – The Eye
  Friday 4/22 – Chapter 16 – The Physiology of Vision

WEEK 16 (Starting Apr. 25th)
DUE Monday 4/25 6:00am
  Connect Quiz – Chap. 16-1 (Anatomy of the Eye)

LAB Quiz 7 (Exercise 33)
  Exercise 20 – Special Senses – The Eye

LECTURE
  Monday 4/25 – Chapter 16 – The Neurophysiology of Visual Pathways
  Wednesday 4/27 – Chapter 16 – Introduction to Special Senses – The Ear
  Friday 4/29 – Chapter 16 – The Physiology of Hearing

WEEK 17 (Starting May 2nd) (Dead Week)
DUE Monday 5/2 6:00am
  Connect Quiz – Chap. 16-2 (Physiology of Vision) AND Chap. 16-3 (Anatomy of the Ear and Hearing)

LAB LAB EXAM IV (100pts) – Exercises 31, 32, 33 and 20

LECTURE
  Monday 5/2 – Chapter 16 – The Physiology of Equilibrium and Balance
  Wednesday 5/4 – Chapter 16 – The Chemical Senses
  Friday 5/6 – Chapter 16 – The General Senses and Pain Pathways

WEEK 18 (Starting May 9th) (Finals Week)
DUE Monday 5/9 6:00am
  Connect Quiz – Chap. 16-4 (Physiology of Equilibrium) AND Chap. 16-5 (Chemical Senses; General Senses; Pain Pathways)

  ALL Extra Credit Assignments/Modules

LECTURE FINAL EXAM TUESDAY, MAY 10th – 12:45-2:45PM  Chapter 16