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Spring 2-1-2019

### BIOH 370.00: Human Anatomy and Physiology for Health Professions II

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## BIOH370 Syllabus Spring 2019

### Human Anatomy and Physiology for Health Professions II

**Course Information:**

Instructor: Laurie Minns, PhD  
 Office: BRB106  
 Phone: 406-243-6013  
 Office Hours: Mondays and Wednesdays 2-2:50pm, by appointment  
 Email: [Laurie.Minns@mso.umt.edu](mailto:Laurie.Minns@mso.umt.edu)

**General Course Information:**

Human Anatomy and Physiology is a 4-credit lecture/laboratory combined, two-semester sequence course (BIOH 365 and BIOH 370). The lecture focuses primarily on physiological and functional processes whereas the laboratory portion of the class focuses on anatomical structure using prosected cadavers, laboratory specimens, animal organ dissection, models, simple physiological experiments and computer simulations. There is overlap between the lecture and laboratory components but based on the limited laboratory time, there will be times when lecture material and lab material do not overlap.

This course predominately serves students majoring in biology, pre-medical, pre-nursing, pre-physical therapy, other pre-health care professions and health and human performance.

**The two-semester sequence is divided as follows:**

BIOH 365	BIOH 370
Body Plan & Organization	Endocrine System
Homeostasis	Cardiovascular System
Cell Biology Review/Metabolism	Lymphatic System & Immunity
Histology	Respiratory System
Integumentary System	Digestive System
Skeletal System & Articulations	Metabolism
Muscular System	Urinary System
Nervous System	Fluid/Electrolytes & Acid/Base Balance
Special Senses	Reproductive System

**Required Prerequisites:**

College Chemistry: CHMY 121N (CHEM 151N): Intro to General Chemistry -or- CHMY 141N (CHEM 161N): College Chemistry  
 College Biology: BIOB 160N (Principles of Biology) -or- BIOH 112 (Introduction to Human Form and Function I)-or- BIOH 113 (Introduction to Human Form and Function II).

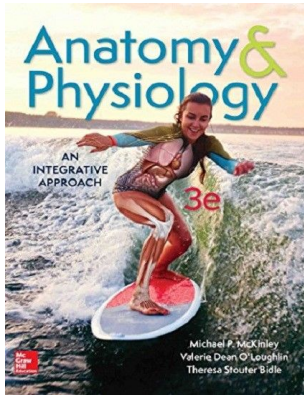
**Recommended Prerequisites:**

BIOB 260: Cellular and Molecular Biology, BIOB272: Genetics and Evolution

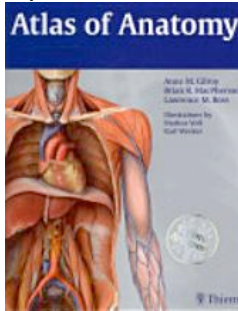
**\*\* In order to advance to BIOH370 for the Spring semester, you must earn a grade of C- or higher in BIOH365**

**Required Course Materials:**

Anatomy and Physiology, an Integrative Approach, 3<sup>rd</sup> edition. McKinley, O'Loughlin, Bidle. McGraw Hill, 2018.



**Optional Course Materials:**



Atlas of Anatomy by Anne M. Gilroy, Brian R. MacPherson, Lawrence M. Ross - Thieme (2008) –ISBN-978-1-60404-062-1 or any related edition.

**Computers and Course Website Information**

Students are expected to be familiar with computers and the Internet. Students are responsible for their own software and computer equipment maintenance and setup as recommended by the University of Montana.

<http://umonline.umt.edu/student-support.php>

**Class-Specific Computer Requirements:**

- Students must download and review posted course materials and other assignments prior to laboratory sessions. Students are expected to have a 'back up plan' if personal computers become compromised.
- The University of Montana maintains several computer labs on campus:  
<http://www.umt.edu/it/support/computerlabs/default.php>
- Students are expected to download copies of course information from the Moodle website and to check email for class announcements.
- **For technical support for using Moodle, please contact UM IT support:**

<http://www.umt.edu/it/support/default.php>

**Course Goals:**

Upon successful completion of this two-course sequence, you will have conceptual and practical information regarding the anatomy and physiology of the human organism.

**Course Objectives:**

- 1) Gain an appreciation for the complementarity of anatomical form with physiological function.
  - 2) Understand how the body systems work to maintain homeostasis.
  - 3) Use critical thinking skills to predict the consequences of homeostatic imbalances on human form and function.
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**Course outcomes are based on the Human Anatomy and Physiology (HAPS)****Learning Objectives:**

- 1) Demonstrate understanding of chemical and biological principles and knowledge that serve as the foundation for understanding human anatomy and physiology.
- 2) Understand and analyze cellular processes governing development, growth and normal function of the human body.
- 3) Understand the processes involved with maintaining homeostasis and anticipate what may occur when homeostatic balance mechanisms are lost.
- 4) Demonstrate practical knowledge of human gross and microscopic anatomy using human cadavers and prepared histological slides.
- 5) Identify structures in the body and analyze their relationship with other structures.
- 6) Describe development, regeneration and normal function of body systems
- 7) Understand the cellular and physiological mechanisms that drive tissue formation and function.
- 8) Employ the scientific process for understanding principles of anatomy and physiology.
- 9) Analyze A&P observations and data and determine the potential physiological consequences.

**Lecture and Laboratory Specific Course Outcomes:**

The beginning of each set of slides used in lecture and in lab detail specific learning objectives addressed in that given unit. Lab Objectives and assigned readings for specific labs are located each week in your lab specific Moodle site.

**Course Information:**

Teaching methods: Lecture and Laboratory (each will portion of the course has its separate Moodle page supplement). Students are also required to purchase and complete MHE Connect exercises through an online format.

**Student Responsibilities:**

- 1) Students are expected to complete the required reading and pre-laboratory assignments prior to class meeting times.
- 2) Students are expected to log on to the course Moodle site regularly to download course materials and read updated course announcements.
- 3) Students are expected use the all inclusive access of CONNECT or to purchase a CONNECT account in order to complete online assessments throughout the semester. Failure to establish an individual online CONNECT account will result

- in forfeiture of points earned through the online platform. No makeup points from failure to complete the online assessments are available.
- 4) Students are expected to monitor their email and online platforms for important course announcements.
  - 5) Regular attendance in lectures and laboratory is strongly recommended for successful completion of the course.
  - 6) If absence from lecture or laboratory is necessary due to illness, it is your responsibility to obtain notes from another student.
  - 7) Students are expected to be respectful to each other, the cadavers and teaching staff and Dr. Minns. Students who fail to do so will be disciplined as described in the student conduct code.

### **Course Policies**

Dr. Minns and the Laboratory Instructors follow academic policies as stated in the 2018-2019 UM Catalog. Students are responsible for being familiar with these policies.

<http://www.umt.edu/catalog/>

These policies include but are not limited to:

- Student Conduct ([http://life.umt.edu/vpsa/student\\_conduct.php](http://life.umt.edu/vpsa/student_conduct.php))
- Class attendance
- Credit/No Credit Grading
- Registrar deadlines
- Incomplete Grading Policy
- Audit: not permitted in this course

#### **Plagiarism**

- Plagiarism is the representing of another's work as one's own. It is a particularly intolerable offense in the academic community and is strictly forbidden. Students who plagiarize may fail the course and may be remanded to Academic Court for possible suspension or expulsion. (See Student Conduct Code section of this catalog.)
- Students must always be very careful to acknowledge any kind of borrowing that is included in their work. This means not only borrowed wording but also ideas. Acknowledgment of whatever is not one's own original work is the proper and honest use of sources. Failure to acknowledge whatever is not one's own original work is plagiarism.

### ***Students with Disabilities:***

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommason Center 154 or 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

Students with disabilities who would like reasonable accommodations must provide documentation to both Dr. Minns and the lab instructor the first week of class so that appropriate arrangements can be made. In the event that students decide after the semester begins that they would like to disclose their disability and request accommodations, students must provide documentation at least 10 days prior to the upcoming assessment so that instructors may prepare appropriately. It is the responsibility of students to make sure they

understand the types of modifications available to them in both the lecture and laboratory portions of the course prior to assessments.

**Disruptive behavior**

Students who are being disruptive in any classroom or laboratory setting by talking with other students during lecture while the instructor is teaching, texting, taking pictures or playing computer games will be warned and may be asked to leave the classroom. Such behaviors impact the learning of other students in the classroom and will not be tolerated. Re-admittance to class is at the discretion of the instructor. A second instance of disruptive behavior will result in dismissal from the class and a grade of F for the semester.

**Evaluation Methods:**

Your course grade will be determined by your performance in the lecture as well as the lab, according to the following evaluation methods:

**Grading System:**

Final Grades will be based upon a total of 800 points (400 points from Lecture Assessments, 400 points from Laboratory Assessments). Please note that the lecture and laboratory components are each worth 50% of your final grade. *Laboratory and Lecture Material may overlap. Final grades will be computed from the total # of points earned /800 and students will receive the same 'grade' for BIOH365 Sec.00 as their laboratory section.*

Lab Graded Activity	# of points toward grade
Lab Practical Exams (2x 100 pts)	200
Lab Quizzes (9x20pts, drop 1 lowest)	160
Case Studies	40
<b>Lab Total</b>	<b>400</b>
Lecture Graded Activity	# of points toward grade
Lecture Exams (4x80 pts)	320
LearnSmart	80
<b>Lecture Total</b>	<b>400</b>

Grades will be calculated based upon the following system; grades will be rounded. (i.e. if a student earns 83.44%, their grade will round to 83% or a B-; if a student earns 83.45% their grade will be rounded to 84% or a B):	
Grade	Percent of Total Points
A	94-100%
A-	90-93%
B+	87-89%
B	84-86%
B-	80-83%
C+	77-79%
C	74-76%
C-	70-73%
D+	67-69.4%
D	64-66%
D-	60-63%
F	59% and Below

**Assessments:**

Students are expected to prepare, and be present for lecture and laboratory examinations on the scheduled dates and at the scheduled time. No student will be allowed to begin any examination later than ten minutes after the scheduled start time for that exam, including laboratory quizzes. Prior to the end of the allotted exam time, students will be warned that the exam period will end shortly; it is up to individual students

to monitor the time during all assessments. Students must turn in exams at the end of the allotted exam time. Be on time and prepared to take a 'closed book exam'. No outside materials, including (but not limited to) papers, notebooks, calculators, translators or cell phones are allowed during exams. Students must arrive on time on the date of the exam in the examination room. Makeup exams for arriving late or in the wrong location are not offered. Leaving during an exam is not permitted and if students opt to leave the exam prior to the end of the examination period, they must turn in their exam to be graded. Re-entry during exams is not permitted.

Students must present their photo ID at the time they turn in their exam to be graded. If a student does not show a photo ID at the time the exam is collected, the exam will not be graded and the exam will be assigned a grade of zero.

### **Quizzes**

Approximately each week, students will be required to take lecture quizzes/homework deployed online or distributed in-class (pop-quizzes). Online quizzes/homework will be taken through the MHE Connect online course supplement. Students are encouraged to work together to review the material covered in the quizzes, but individual students must submit their own work. Late submissions will not be accepted and there is no opportunity to make up missed quizzes. Some quizzes may occur during class times and if students miss these quizzes for any reason they may NOT be made up. All online quizzes are available at the beginning of the semester but have defined due dates described later in this syllabus. Laboratory quizzes occur at the beginning of most laboratory periods and consist of material covered in the previous lab and material to be covered in that day's lab. Specific lab quiz dates are specified later in this syllabus.

The CONNECT LearnSmart adaptive homework assignments are graded based on mastery percent completion of the assignments. That means if you successfully master the material prior to the due date, you will receive 100% completion. If you miss an assignment you cannot make up the work. If you do not complete an assignment in its entirety, you will receive credit only for the work you complete.

### **Honors Lab (section 80)**

The honors lab section will cover laboratory topics in more depth than the regular lab sections. Honors lab students are expected to be self-driven and to take advantage of additional learning resources such as the honors specific open labs and additional honors lab only learning opportunities. The students enrolled in the honors lab section will take a cumulative final practical exam. Instead of the graded case study assignments, honors lab students will complete semester project worth a total of 40 points. The honors lab instructor will provide details regarding this semester project for honors lab students.

### **Laboratory Human Anatomy and Physiology Society (HAPS) Learning Objectives and Required Pre-lab Exercises.**

Students are expected to review the pertinent readings and complete Anatomy Revealed (AR) activities prior to their lab meeting to prepare for the labs.

**Laboratory Practical Exams**

*Laboratory Instructors will discuss the breadth and scope of Laboratory Practical Examinations.*

Two practical examinations each worth 100 points will be administered during the semester. These exams are 50 minutes long and involve rotating around laboratory stations that contain specimens to be identified; a relationship between form and function will also be assessed. The format will be further described in the laboratory; some lab and lecture material may overlap. [Please note that students enrolled in the Honors laboratory section will have a cumulative second practical laboratory exam.] “Make-ups” of practical exams are not available since these exams are based on the use of slides and actual laboratory specimens.

***Make-up Assignments:***

NO “make-up” opportunities on missed assignments are available.

***Final Examination***

Please note the final examination policy from the University of Montana Undergraduate Course Catalog 2018-2019 (<http://www.umt.edu/catalog/>)

“Final examinations for the semester are scheduled in two hour segments, one for each course. ... The time scheduled for final examinations is the only time period during which final examinations are to be given...”

Students may seek relief from writing **more than two** examinations during the same day. Students who are scheduled for more than two examinations may contact the appropriate faculty to arrange an alternate testing time during the scheduled final examination period. If satisfactory arrangements cannot be made, the student should seek the assistance of his or her dean.”

For BIOH370, the ‘alternate testing time’ will be a time after the originally scheduled examination and will require written documentation of more than two final examinations on a given day. The exam administered during the ‘alternate testing time’ will be different than the exam administered during the scheduled exam time and will consist of multiple choice, short answer and essay questions. Written documentation for rescheduling the Final exam must be provided to Dr. Minns by April 19, 2019.

***Assessment Review/Grade Disputes***

Lecture Exam keys will be posted outside Dr. Minns’ office. Laboratory Practical Exam Keys will be posted outside of HS101 or on the lab-specific Moodle page. It is the students’ responsibility to review the exam keys and understand how they may have missed points. *Any disputes regarding test items or examination grades must be communicated by email or through the Moodle specific dropbox when appropriate within 5 days after the exam has been returned to the class or as announced on Moodle.* Under no circumstances will examination grades be reconsidered after this window. If a dispute should arise regarding the answer to a lecture or laboratory examination or other assessment item, the judgment of the faculty member will be final. Due to grading deadlines, an announcement regarding the grade dispute window will be announced in the lab and in lecture with regard to the second lab practical and final lecture exam.

***Make-up Examinations***

Make-up examinations are reserved for those students who cannot take an exam on the originally scheduled date due to:



- **A documented illness**
- **Documentation of participation in a University-sanctioned activity**
  - **Participation in a University-sanctioned activity requires written communication from the University of Montana Office of Academic Advising**
  - **Student athletes must provide documentation to Dr. Minns within the first week of classes**

Before the scheduled exam or quiz time, you must explain the nature of your problem by email:

- **For Lecture Examinations only: Dr. Minns**
- **For laboratory quizzes only: Your laboratory instructor and Dr. Minns**

After receipt of *written* documentation supporting the reason for absence is received, Dr. Minns (lecture) and your laboratory instructor (laboratory section) will determine whether a make-up exam is merited and Dr. Minns or your laboratory instructor will schedule the make-up exam. Please note that the make-up exam may be different than the original exam. Lecture make-up exams will contain short answer and essay questions. If you do not contact your instructor, Dr. Minns and the lab instructor of an alternative lab you wish to attend on a one time basis prior to the scheduled exam, absolutely no make-up will be available.

### ***Correspondence***

An official UM student email address must be used for all correspondence.

### **Additional Teaching Staff**

#### ***Laboratory Instructors:***

Abby Weiderstrom, [abby.weiderstrom@umconnect.umt.edu](mailto:abby.weiderstrom@umconnect.umt.edu)

Victoria Gifford, [victoria.gifford@umconnect.umt.edu](mailto:victoria.gifford@umconnect.umt.edu)

Heidi Dreher, Heidi [heidi.dreher@umconnect.umt.edu](mailto:heidi.dreher@umconnect.umt.edu)

#### ***Undergraduate Peer Leaders:***

Each laboratory section will have at least one undergraduate peer leader to assist with instruction. Peer advisors are not permitted to bring students to the lab outside of normal laboratory hours. They are not available for private tutoring.

Students interested in becoming a peer leader for future BIOH365 and BIOH370 courses may apply for a limited number of peer advisor positions in the Spring (the deadline for applications is March 1). In order to be eligible to become a peer advisor, students must earn a grade of B or higher in BIOH365 and BIOH370 and must fill out an application. Promising candidates will be invited for an interview. Peer leaders are undergraduate students who enroll in BIOH480 or BIOH481 for assisting in laboratory instruction and BIOH463 and BIOH465 for assisting in lecture instruction. Peer leaders also co-enroll in the cadaver dissection course. Interested candidates are encouraged to talk with Dr. Minns and your laboratory instructor and their current peer advisors.

**Access to the Laboratory Outside of Regularly Scheduled Class Hours**

Access to the laboratory is only available during scheduled 'Open Labs.' Your laboratory instructor will inform you of 'Open Lab' times. Access outside of your scheduled lab and 'open labs' is not permitted.

**Laboratory Specimen and Cadaver Information and Policies.**

Much of your education in anatomy will result from a selfless donation of thoughtful individuals who voluntarily chose to donate their body to the Montana Body Donation Program that supports WWAMI education programs. *WWAMI (Washington, Wyoming, Alaska, Montana and Idaho) is a cooperative regional medical education program of the University of Washington School of Medicine that provides places for twenty Montana students per year in its entering medical student class. These twenty students take their first year of medical school at Montana State University and complete their studies at the University of Washington in Seattle and at community clinical training sites throughout the Northwest.*

**Respect for the Cadavers:**

*These donated cadavers are gifts and must be treated with the dignity and respect they deserve. It is inappropriate to make disrespectful comments within and outside of the laboratory. You will observe professional conduct while in the lab and outside the lab. Naming of the cadavers, unnecessary horseplay, posing of the cadavers, etc WILL NOT BE TOLERATED. These cadavers are the result of gifts from fellow Montanans and their families who believed strongly in the benefit of health science education.*

<http://www.montana.edu/wwwwami/bodydonate.html>

Rules for Cadaver Use in the Anatomy and Physiology Labs:

- 1) The cadavers used in this lab were obtained from the Montana Body Donation Program at Montana State University. Cadavers are donated to MSU according to state regulations. Persons donating their body receive no financial compensation; this is truly their ultimate gift. Hence it is imperative that proper respect be paid to the cadaver at all times.
- 2) Only students enrolled BIOH 365, BIOH 112 and teaching staff are allowed into the cadaver lab at any time. No minor children or other family members are to be brought to the open lab times. If you see someone in the lab who you believe is unauthorized, notify laboratory personnel and/or ask him/her to leave the lab.
- 3) Body parts, tissue, etc must not be removed from the lab.
- 4) No cameras, camera phones or electronics with photo or video capability are allowed in the lab. Photography is prohibited.
- 5) Please be careful, the cadaver dissections will be used and material reviewed in other lab sections by other students. Keep the dissections moist and well covered when not working on that portion of the cadaver. Keep doors to lab closed and locked to keep security intact; students should police the lab.

**Laboratory Safety in the Anatomy and Physiology Labs**

- 1) In case of an emergency, dial extension 4000 to report serious injuries. Phones are located throughout the Health Sciences Building. The Health Sciences main office is in room 104.
- 2) First Aid supplies are available in the supply room for HS 101 (the anatomy lab), HS 104 (the main office) and HS 403.

- 3) You are required to wear disposable gloves (nitrile or neoprene, latex gloves are not acceptable) at all times while working with the cadaver prosections. Cadavers are embalmed with a fluid containing propylene glycol, ethyl alcohol, phenol and formaldehyde. Physical contact of your skin and clothing should be avoided.
- 4) Wear old clothes and a long-sleeved lab coat while working with the cadaver. Lab coats should not be worn outside the lab.
- 5) No open-toes shoes or sandals are allowed in the lab. Wear shoes that cover your entire foot.
- 6) Contact lens wearers should be aware that chemical fumes can pass into gas permeable and soft lenses. These fumes irritate the cornea. Protective glasses (prescription or safety glasses) are recommended to protect against chemical splashes. Know the location of the eyewash station before you begin.
- 7) If you are pregnant, or believe you may be pregnant, you may NOT participate in the laboratories until you provide Dr. Minns with written documentation from your obstetrician that verifies an understanding of the chemicals to which you and your fetus are being exposed while in the presence of the cadavers.
- 8) No foods, drinks, gum or the application of makeup are allowed in the lab.
- 9) Respirators can be purchased for use in the lab, if desired.
- 10) Wash hands prior to leaving the lab.

### **Important Class Dates**

Dr. Minns may amend these dates.

Day of the week	Dates	Monday	Readings
Friday	Jan. 11	Introduction to BIOH370 The Endocrine System	Chapter 17
Monday	Jan. 14	The Endocrine System	Chapter 17
Lab 1	1/15/- 1/17	The Endocrine System	Chapter 17
Wednesday	Jan. 16	Endocrine System	Chapter 17
Friday	Jan. 18	Endocrine System	Chapter 17
Sunday	Jan. 20	Lecture Chapter 17 Connect homework due	
Monday	Jan. 21	No class- MLK day	Chapter 17 Chapter 18
Lab 2	1/22-1/24	Blood Lab quiz 1	T Chap. 19
Wednesday	Jan 23	The Cardiovascular System: Blood	Chapter 18
Friday	Jan. 25	The Cardiovascular System: Blood The Cardiovascular System: Heart	Chapter 18 Chapter 19
Sunday	Jan. 27	Lecture Chapter 18 and 19 Connect homework	

Monday	Jan. 28	The Cardiovascular System: Heart	Chapter 19
Lab 3	1/29-1/31	Heart Anatomy Lab quiz 2	Chapter 19
Wednesday	Jan. 30	The Cardiovascular System: Heart	Chapter 19
Friday	Feb. 1	In class tutor-led review session for lecture exam 1	Chapter 19
Monday	Feb. 4	Lecture Exam 1	Chapters 17, 18, 19,
Lab 4	2/5-2/7	Heart Physiology and Blood Pressure Lab Physiology demo- ECG's and interpreting rhythm strips Physiology of Circulation Lab quiz 3	Chapter 19
Tuesday	Feb. 5	Lecture Chapter 20 Connect homework due	
Wednesday	Feb. 6	Cardiovascular System: Vessels and Circulation	Chapter 20
Friday	Feb. 8	Cardiovascular System: Vessels and Circulation	Chapter 20
Sunday	Feb. 10	Lecture Chapter 21 Connect homework due Lecture Chapter 22 Connect homework due	
Monday	Feb. 11	Lymphatic System	Chap. 21
Lab 5	2/12-2/14	Blood Vessels Vessels of the Head, Neck and Upper Extremity Lab quiz 5	Chapter 20
Wednesday	Feb. 13	Lymphatic System	Chap. 21
Friday	Feb. 15	Immunity	Chapter 22
Monday	Feb. 18	No Class- President's Day	
Lab Practical Exam 1	2/19-2/21	Laboratory Practical Exam I	Labs 1-5
Wednesday	Feb 20	Immunity	Chapter 22
Friday	Feb. 22	Immunity	Chapter 22
Sunday	Feb. 24	Lecture Chapter 23 Connect homework due	
Monday	Feb. 25	Immunity:	Chapter 22
Lab 6	2/26-2/28	Lymphatics and Immune System No lab quiz this week	
Wednesday	Feb. 27	The Respiratory System	Chapter 23

Friday	March 1	The Respiratory System UGTA Applications for 2019-2020 year are due March 9 by 5pm in the DBS office	Chapter 23
Monday	March 4	Lecture Exam 2	Chapters 20, 21, 22, 23
Lab 7	3/5-3/7	Anatomy of the Respiratory System Lab quiz 6	Chapter 23
Tuesday	March 5	Lecture Chapter 26 Connect homework due	
Wednesday	March 6	Digestive System	Chapter 26
Friday	March 8	Digestive System	Chapter 26
Monday	March 11	Digestive System	Chapter 26
Lab 8	3/12-3/14	Physiology of Respiration Physiology demo: Spirometry and interpretation Lab quiz 7	
Wednesday	March 13	Urinary System	Chapter 24
Friday	March 15	Urinary System	Chapter 24
Sunday	March 17	Lecture Chapter 24 Connect homework due Lecture Chapter 25 Connect homework due	
Monday	March 18	Urinary System Montana State Science Fair- BE a JUDGE (class will dismiss early)	Chapter 24
Lab 9	3/19-3/21	Digestive System Lab quiz 8	Chapter 26
Wednesday	March 20	Urinary System/Fluid and Electrolytes	Chapter 25
Friday	March 22	Fluid and Electrolytes	Chapter 25
Mon-Friday	3/25-3/29	No Class- SPRING BREAK	
Monday	April 1	Fluid and Electrolytes	Chapter 25
Lab 10	4/2--4/4	Blood Vessels Vessels of the Abdomen and Lower Extremity Lab quiz 8	Chapter 20
Wednesday	April 3	Lecture Exam 3	Chapters 24, 25, 26
Friday	April 5	Reproductive System	Chapter 28
Sunday	April 7	Lecture Chapter 28 Connect homework due	
Monday	April 8	Reproductive System	Chapter 28
Lab 11	4/9-4/11	Urinary System Physiology demo: Urinalysis testing and interpretation Lab quiz 9	Chapter 24
Wednesday	April 10	Reproductive System	Chapter 28
Friday	April 12	Reproductive System	Chapter 28
Sunday	April 14	Lecture Chapter 29 Connect homework due	

Monday	April 15	Development, Pregnancy and Heredity	Chapter 29
Lab 12	4/16-4/18	Reproductive System – Male and Female Lab quiz 10	Chapter 28
Wednesday	April 17	University of Montana UMCUR <a href="http://www.umt.edu/ugresearch/umcur/">http://www.umt.edu/ugresearch/umcur/</a> Attend UMCUR for Extra credit. If you are presenting at UMCUR, please email Dr. Minns	Chapter 29
Friday	April 19	Development, Pregnancy and Heredity	Chapter 29
Monday	April 22	Development, Pregnancy and Heredity	Chapter 29
Lab Practical II	4/23-4/26	****Lab Practical #2**** (labs 6-12)	
Wednesday	April 24	Development, Pregnancy and Heredity	Chapter 29
Friday	April 26	Development, Pregnancy and Heredity	Chapter 29
Finals Week	Thursday May 2	Final Exam 10:10am-12:10pm	Chapters 28 and 29 and Semi- cumulative

**Important Dates and Assigned Readings (this may be amended by Dr. Minns during the Semester)**

**Laboratory Specific Dates and Learning Outcomes**

<b>Dates Tues-Thurs</b>	<b>Topic</b>	<b>Learning Outcomes</b>
<b>Lab 1 1/23-1/25</b>	The Endocrine System	<p>All Labs: HAPS Mod B: Students who have completed this section of the course should be able to explain the basic concept of homeostasis and how homeostatic mechanisms apply to body systems.</p> <p>HAPS Mod J.: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the endocrine system and explain the functional roles of their respective hormones in communication, control, and integration.</p>
<b>Lab 2 1/30-2/1</b>	Blood Physiology demo: Blood typing, Formed element identification, homeostatic imbalances of the blood	<p>HAPS Mod K: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the cardiovascular system and explain their functional roles in transport and hemodynamics.</p>
<b>Lab 3 2/6-2/8</b>	Heart Anatomy	
<b>Lab 4 2/13-2/15</b>	Heart Physiology/Blood Pressure Physiology demo- ECG's and interpreting rhythm strips Physiology of Circulation	
<b>Lab 5 2/20-2/22</b>	Blood Vessels Vessels of the Head, Neck and Upper Extremity	
<b>Lab Practical 1 2/24-2/25</b>		
<b>Lab 6 3/6-3/8</b>	Lymphatics and Immune System	<p>HAPS Mod L: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the lymphatic system and explain their functional roles in fluid dynamics and immunity.</p>
<b>Lab 7 3/13-3/15</b>	Anatomy of the Respiratory System	<p>HAPS Mod M: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic</p>

<b>Lab 8</b> <b>3/20-3/22</b>	Physiology of Respiration Physiology demo: Spirometric testing and interpretation !	anatomical components of the respiratory system and explain their functional roles in breathing/ventilation and in the processes of external and internal respiration.
<b>3/27-3/29</b>	Spring Break! No Labs	
<b>Lab 9</b> <b>4/3-4/6</b>	Digestive System	HAPS Mod N: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the digestive system and explain their functional roles in digestion, absorption, excretion and elimination. HAPS Mod O: Students who have completed this section of the course should be able to explain the functional relationship among cellular, tissue and organ level metabolism, the role nutrition plays in metabolism, and the mechanisms by which metabolic rate is regulated in the body.
<b>Lab 10</b> <b>4/10-4/12</b>	Blood Vessels Vessels of the Abdomen and Lower Extremity	HAPS Mod K: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the cardiovascular system and explain their functional roles in transport and hemodynamics.
<b>Lab 11</b> <b>4/17-4/19</b>	Urinary System Physiology demo: Urinalysis testing and interpretation	HAPS Mod P: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the urinary system and explain their functional roles. HAPS Mod Q: Students who have completed this section of the course should be able to identify and describe the physiology of the homeostatic mechanisms that control fluid/electrolyte and acid/base balance.
<b>Lab 12</b> <b>4/24-4/26</b>	Reproductive System – Male and Female	HAPS Mod R: Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the reproductive system and explain their functional roles in reproduction and inheritance.
<b>Lab Practical Exam 2</b> <b>Covers labs 6-12</b>		<b>On labs 6-12</b>