BI 107 HUMAN ANATOMY AND PHYSIOLOGY 1 LABORATORY: CRN- 21102, 21104, 22432
LAB: DAY- SAT, TIME- 8:30 am TO 11:20 am, 12:00 am TO 2:50 pm ROOM- AB213
WED, TIME -6:00 pm TO 8:45 PM

Instructor: Richard Simons
Email: rsimons@mvcc.edu

Materials:

Gloves must be worn when contacting specimens. Students must provide their own gloves. Gloves are available at the college bookstore and from other locations. We strongly recommend the use of nitrile gloves.

Course Description:
This course, which is a continuation of BI106 Human Anatomy & Physiology 1, involves the study of structure, function, and regulation in the human organism. Topics include blood, peripheral nerves, the cardiovascular system, lymphatics, the respiratory system, the excretory system, the endocrine system, the reproductive systems, the digestive system, and metabolism. Laboratories involve vertebrate dissection, the use of prosected human cadavers and human skeletal materials, microscope work, non-invasive human experimentation, and possibly animal experimentation.

Prerequisite: BI106 Human Anatomy & Physiology 1, or Life Science Department Head permission. Students enrolled in Health Services Department programs are recommended to complete this course before beginning their specialized program coursework. Students with transfer credit for BI106 Anatomy and Physiology 1 must complete a three-hour orientation to the use of prosected human cadavers before participating in the BI107 Human Anatomy and Physiology 2 laboratory. Transfer students must meet with the Life Science Department Head thirty days before beginning this course.

Laboratory Objectives:
The laboratory portion of this course is designed to give the student hands-on experience in anatomy and physiology and to reinforce material covered in lecture. Topics include blood, peripheral nerves, the cardiovascular system, lymphatics, the respiratory system, the excretory system, the endocrine system, the reproductive systems, the digestive system, and metabolism. Additional specific objects are detailed in the attached course outline.
ATTENDANCE:
Regular and punctual attendance is expected. I will take attendance during every laboratory. You are expected and encouraged to use the lab during those periods when the facilities are open to review material covered during your normal lab sessions. A list of available times will be provided. Plan on arriving in the lab on time; persistent tardiness is rude, disruptive, prevents the class from completing necessary work and limits time available for quizzes. If you arrive late, you may not be allowed to take the scheduled quiz. Failure to attend on a regular basis will result in your being dropped from the course roster.

GRADING:
Refer to the laboratory for information and details on how your lab grade will be determined. Please take care of the following: There are no makeup quizzes in the laboratory portion of the course except under the following circumstances: 1) At the direction of the college (such as a closing due to weather conditions); or 2) Due to serious illness or death in the immediate family. There are no other options—please don’t ask.

CLASS CANCELLATION POLICY:
In the event that a laboratory must be cancelled, a notice will be posted on MVCC’s class cancellation website and a notice be placed at the laboratory door. Options to make up work missed as a result of cancellation will be emailed to your MVCC email address.

STUDENTS WITH SPECIAL NEEDS:
I would appreciate hearing from anyone in the class who has any type of disability (e.g., physical, learning, psychiatric, vision, hearing etc.) which may require some special accommodation. Please see me after lab or contact via email so that we can discuss your needs. Before services can begin, you must contact Lynn Igoe, Coordinator of Disability Services, 792-5413 (Voice or TTY), or Tamara Mariotti, the Learning and Assistive Technology Specialist, 731-5702; both are located in Room 153 of the Academic Building on the Utica campus. They are staff members who review your documentation, determine eligibility for accommodations, and determine what those accommodations will be.

Academic Integrity
The College is committed to a spirit of intellectual inquiry rooted in the ethical behavior of its participants. This means that certain acts which affect the integrity of learning are not permissible. Engaging in dishonest or unethical behavior may result in disciplinary action taken against the student by the instructor, department or other appropriate College official. The following are examples, but not the full range of prohibited behavior in the classroom, studio, laboratory, library, computer center, or at internship or other college learning sites. Students cannot:

- Ask for, give or receive help during tests, examinations, or quizzes or other evaluations without permission of the instructor
- Utilize books, papers, computer-based media or other materials and equipment during tests, examinations, quizzes or other evaluations without permission of the instructor
• Engage in plagiarism by submitting or using as their own another person's oral, written or computer-based work. All sources of material must be credited.
• Use another person's data, solutions, computer account, or calculations without the appropriate authorized permission.
• Steal, mutilate, alter or deface library materials, computer-based media or other academic materials.
• Illegally copy materials (print, audiovisual or computer-based media) that are protected under provisions of the copyright laws of the United States or foreign countries. (See the MVCC Copyright Policy).

(found at: www.mvcc.edu/clgnfo/orgnztn/policies/acdmcntgrty.cfm

LABORATORY EXPECTATIONS
To have the most effective laboratory experience, it will be necessary to come to the laboratory prepared. Please read over the procedures for your laboratory activities before coming to lab. Carefully read the Lab Assignments and Evaluation Schedule that is attached to this syllabus so you will be prepared for all labs. Carefully read, understand, and follow the General Lab Policies found on pages 3-9 of your laboratory manual. Failure to comply with these policies can result in your dismissal from the class.

Your time and your colleague’s time in the laboratory is valuable commodity. Disruptive behavior that detracts from that time will not be tolerated. If a behavior is detracting from lab time I will bring it to your attention. If that behavior continues you will be asked to leave.

Use of cell phones, pagers, and cameras is prohibited in the Anatomy and Physiology laboratory. Either leave these devices outside of the class or turn them off and put them away while you are in the class. No text messaging, no phone calls, and no photographs. Turn your cell phone off, just don’t leave it on vibrate. If you must leave an electronic device on for a valid personal reason, you must obtain my permission first, then leave the lab to take the call or message.
LAB 1
Assignments To Be Completed Before Lab if Possible:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Read, learn, review and understand Overview of the Laboratory Experience: General Philosophy, Policies, pp3-9.
Read Laboratory Exercise H-5 Histology of Reproductive pp 279-291.
*Look up & describe in the lab manual all specialized terms used in Laboratory Exercise H-5.
Use the Exploring A&P CD or the MVCC Portal to complete pre-lab quizzes on the histology of the reproductive system, pg 291.
Read In Marieb, 8th ed.: Segments on gross and microscopic anatomy in Chapter 27, Reproductive System
Assignments To Be Completed During Lab:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Laboratory Exercise H-5 Histology of Reproductive System pp 279-291.
Check-offs on male and female histology by your instructor before you leave lab.
Assignments To Be Completed Before Lab 2:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Read Laboratory Exercise A-9:
*Look up & describe in lab manual all undefined specialized terms used in Exercise 9.
Read, learn and understand your instructor’s lab policies.
Read in Marieb, 8th ed.: Segments dealing with gross anatomy in Chapter 27, The Reproductive System.
Evaluation:
Check-off on microscopic anatomy of the male (4 points).
Check-off on microscopic anatomy of the female (4 points),

LAB 2
Assignments To Be Completed During Lab:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Check-offs on male and female anatomy by your instructor before you leave lab.
Assignments To Be Completed Before Lab 3:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
*Look up & describe in the lab manual all specialized terms used in Laboratory Exercise 8.
Read Laboratory Exercise H-4: Histology of the Endocrine System, pp 271-277
*Look up & describe in the lab manual all specialized terms used in Laboratory Exercise 4.
Use the Exploring A&P CD or the MVCC Portal to complete the pre-lab quiz (page 277) and complete H-4: Histology of the Endocrine System, pp 271-277).

Read In Marieb, 8th ed.: segments on gross and microscopic anatomy in Chapter 16, Endocrine System

**Evaluation:**
Check-off on gross anatomy of the male (4 points).
Check-off on gross anatomy of the female (4 points).

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**LAB 3**

**Assignments To Be Completed During Lab:**

*In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):

**Assignments To Be Completed Before Lab 4:**

*In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
*Look up & describe in the lab manual all specialized terms used in Exercise A-3.
Read in Marieb, 8th ed.: all gross anatomy segments in Chapter 23, Digestive System.

**Evaluation:**
Check-off on gross anatomy of the endocrine system (4 points).
Check-off on histology of the endocrine system (4 points).

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**LABS 4 and 5**

**Assignments to be Completed During Lab**

*In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
To be checked off by your instructor before you leave lab.

**Assignments To Be Completed Before Lab 6:**

*In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Read Laboratory Exercise H-3, Histology of the Digestive System, pp 259-269.
Use the Exploring A&P CD or the MVCC Portal to complete the pre-lab quiz on Histology of the Digestive System, page 269.
Be prepared to hand in the completed pre-lab quiz at the start of lab 6.
*Look up & describe in the lab manual all specialized terms used in Exercise H-2.
Read in Marieb, 8th ed.: all microscopic anatomy segments in Chapter 23, Digestive System.

**Evaluation:**
Week 4: Check-offs on the gross anatomy of the human digestive system Part 1 (4 points)
Quiz on gross anatomy: Endocrine system and male & female reproductive systems (20 points).
Week 5: Check-offs on the gross anatomy of the human digestive system Part 2 (4 points).
Histology Quiz #1: Endocrine and reproductive systems (30 points)

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**LAB 6**
Assignments to be Completed During Lab
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Laboratory Exercise H-3, Histology of the Digestive System, pp 259-269.
To be checked off by your instructor before you leave lab.

Assignments To Be Completed Before Week 7 Lab:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
*Look up & describe in lab manual all undefined specialized terms used in Exercise A-15.
Read in Marieb, 8th ed.: Segment on gross anatomy of the heart in Chapter 18, The Cardiovascular System: The Heart.
Evaluation:
Quiz on gross anatomy of the digestive system (15 points).
Check-off on the histology of the digestive system (4 points).

LAB 7
Assignments To Be Completed During Lab:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Human and sheep heart check-offs by your instructor before you leave lab.

Assignments To Be Completed Before Lab 8:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
*Look up & describe in lab manual all undefined specialized terms used in exercises H-7 and H-8.
Use the Exploring A&P CD or the MVCC Portal to complete pre-lab quizzes on the histology of histology of the respiratory and excretory (urinary) systems on page 311. Be prepared to hand these pre-labs in at the start of lab 8.
Read in Marieb, 8th ed.:
Segments dealing with microscopic anatomy in Chapter 22, Respiratory System; Chapter 25, Urinary System.
Evaluation:
Quiz on histology of the digestive system (15 points)
Check-off on dissection & gross anatomy of the sheep heart (4 points).
Check-off on gross anatomy of the human heart and coronary circulation (4 points).

LAB 8
Assignments To Be Completed During Lab:
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):
H-7 Histology of the Respiratory System and
H-8 Histology of the Excretory System pp293-311.
Two exercises to be checked off by your instructor before you leave lab.

**Assignments To Be Completed Before Lab 9:**
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):
*Look up & describe in lab manual all undefined specialized terms used in Exercises 17 & 18.
Read in Marieb, 8th ed.:
Segments relating to gross anatomy in Chapter 22, The Respiratory System.
Segments relating to gross anatomy in Chapter 25, The Urinary System.

**Evaluation:**
Check-off on histology of the respiratory systems (4 points).
Check-off on histology of the excretory system (4 points).

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**LAB 9**

**Assignments To Be Completed During Lab:**
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):
Both to be checked off by your instructor before you leave lab.

**Assignments To Be Completed Before Lab 10:**
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):
*Look up & describe in lab manual all undefined specialized terms used in Exercises A-16 and A-13
Read in Marieb, 8th ed.:
Segments dealing with the gross anatomy of blood vessels in Chapter 19: Blood Vessels.
Segments on spinal nerves and nerve plexi in Chapter 13, The Peripheral Nervous System.

**Evaluation:**
Quiz on the gross anatomy of the heart and the coronary circulation (15 points).
Check-off on the gross anatomy of the respiratory system (4 points).
Check-off on the gross anatomy of the urinary system (4 points).

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**LAB 10**

**Assignments To Be Completed During Lab:**
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):

To be checked off by your instructor before you leave lab.

**Assignments To Be Completed Before Lab 11:**
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):

*Look up & describe in lab manual all undefined specialized terms used in Exercises A-16 and A-13
Read in Marieb, 8th ed.:
Segments dealing with the gross anatomy of blood vessels in Chapter 19: Blood Vessels.
Segments on spinal nerves and nerve plexi in Chapter 13, The Peripheral Nervous System.

**Evaluation:**
Histology Quiz #3: Respiratory, and urinary systems (15 points).
Check-off #1 on the gross anatomy of systemic circulation: Arteries & veins superior to the diaphragm (4 points).

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**LAB 11**

**Assignments To Be Completed During Lab:**
In *Exploring Human Anatomy & Physiology in the Lab, 4th ed.* (Drogo & Perrotti):
Both to be checked off by your instructor before you leave lab.

**Assignments To Be Completed Before Lab 12:**
Read background information the ECG and heart sounds provided by your instructor.
Read in Marieb, 8th ed.:
Segment dealing with electrocardiogram in Chapter 18: The Heart.

**Evaluation:**
Check-off #2 on the gross anatomy of systemic circulation: Arteries & veins inferior to the diaphragm (4 points).
*Optional check-off at instructor’s discretion on peripheral nerves (4 points).*

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**LAB 12**

**Assignments To Be Completed During Lab:**
The ECG and Heart Sounds: a Lab Tutor Exercise

**Assignments To Be Completed Before Lab 13:**
Read background information on respiratory physiology and pulmonary function testing provided by your instructor.
Read in Marieb, 8th ed.: Segment on lung compartments and pulmonary function testing in Chap 22, Respiratory System.

**Evaluation:**
Quiz on the gross anatomy of systemic circulation, respiratory and urinary systems (30 points).
**LabTutor Report on the ECG and Heart Sounds** (15 points) - to be submitted by the end of the lab session.

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**LAB 13**
Assignments To Be Completed During Lab:
Respiratory Physiology: a LabTutor Exercise.

Assignments To Be Completed Before Lab 14:
Read background information on finger plethysmography provided by your instructor:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Read Laboratory Exercises P-10: Graded Aerobic Exercise, pp435-443.
Segment dealing with heart activity and blood flow during exercise in chapters 18, The Heart, and 19, Blood Vessels.
Evaluation:
Take-home quiz on EEG/EKG - due at the start of lab (15 points).
LabTutor Report on Respiratory Physiology (15 points) - to be submitted by the end of the lab session.

LAB 14
Assignments To Be Completed During Lab:
Finger Plethysmography: a LabTutor Exercise
Laboratory Exercises P-10: Graded Aerobic Exercise, pp435-443.

Assignments To Be Completed Before Lab 15:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Review, preliminary analysis of results, and completion of lab manual questions and/or instructor questions on graded aerobic exercise.
Evaluation:
LabTutor Report on plethysmography (15 points) - to be submitted by the end of the lab session.

LAB 15
Assignments To Be Completed During Lab:
In Exploring Human Anatomy & Physiology in the Lab, 4th ed. (Drogo & Perrotti):
Analysis of Data: Graded Aerobic Exercise,
Using completed lab manual questions and lab data, complete in-lab Graded Aerobic Exercise, exercise/quiz provided by your instructor. (15 points)
In-lab check-off on blood. (4 points).

BI107 (Human Anatomy and Physiology 2)
Common Approach to Grading the Lab Experience  
(Revised 6/2010)

1. Lab is worth one-third of your overall grade in the course.  
2. All quizzes count… **there are no dropped quizzes.**  
3. There is no final lab practicum.  
4. Your lab grade will be calculated based on the following scheme:

<table>
<thead>
<tr>
<th>Type of Evaluation</th>
<th>Number</th>
<th>Value</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-lab Check-off</td>
<td>18</td>
<td>4</td>
<td>72 (76)</td>
</tr>
<tr>
<td>In-lab Anatomy/Physiology Quiz</td>
<td>3</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>In-lab Anatomy/Physiology Quiz</td>
<td>1</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>In-lab Anatomy/Physiology Quiz</td>
<td>1</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>In-lab LabTutor Report</td>
<td>2</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Take-home Physiology Quiz</td>
<td>1</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>In-lab Histology Quiz</td>
<td>1</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>In-lab Histology Quiz</td>
<td>2</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

**Possible Total Earned Lab Points**  
------------------------------------------------- 272 (276)

The check-off on peripheral nerves is optional at the instructor’s discretion.  
Consult your lab instructor for any additional policies regarding lab.  
If for any reason, the schedule or number of evaluations is altered, you will be informed.

**Remember:** If you show up for lab and are not prepared, there is a real possibility that you may not be allowed to participate in the day’s lab activity. This could result in a grade of zero for the week’s lab.
<table>
<thead>
<tr>
<th>Week</th>
<th>Lab Ex</th>
<th>Lab Topic</th>
<th>Check-off</th>
<th>Quiz/Assignment</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>H-5</td>
<td>Microscopic anatomy of reproductive system</td>
<td>Yes/4+4</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>A-9</td>
<td>Gross anatomy of reproductive system</td>
<td>Yes/4+4</td>
<td>None</td>
</tr>
<tr>
<td>3</td>
<td>A-8 H-4</td>
<td>Endocrine anatomy and histology</td>
<td>Yes/4+4</td>
<td>None</td>
</tr>
<tr>
<td>4</td>
<td>A-3</td>
<td>Gross anatomy of the digestive system, Part 1</td>
<td>Yes/4</td>
<td>GA: Endo/Reproductive-20</td>
</tr>
<tr>
<td>5</td>
<td>A-3</td>
<td>Gross anatomy of the digestive system, Part 2</td>
<td>Yes/4</td>
<td>Histo: Endo/Reprod -30</td>
</tr>
<tr>
<td>6</td>
<td>H-3</td>
<td>Histology of the Digestive System</td>
<td>Yes/4</td>
<td>GA: Digestive -15</td>
</tr>
<tr>
<td>7</td>
<td>A-15</td>
<td>Gross anatomy of the heart</td>
<td>Yes/4+4</td>
<td>Histo: Digestive -15</td>
</tr>
<tr>
<td>8</td>
<td>H-7and 8</td>
<td>Histology of respiratory and urinary systems</td>
<td>Yes/4+4</td>
<td>None</td>
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<tr>
<td>9</td>
<td>A-17,18</td>
<td>Gross anatomy of respiratory and urinary systems</td>
<td>Yes/4+4</td>
<td>GA-Heart-15</td>
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<tr>
<td>10</td>
<td>A-16</td>
<td>Gross anatomy of systemic circulation – 1</td>
<td>Yes/4</td>
<td>Histo: Resp/Ur-15</td>
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<tr>
<td>11</td>
<td>A-13,16</td>
<td>Gross anatomy of systemic circulation – 2</td>
<td>Yes/4</td>
<td>None</td>
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<tr>
<td></td>
<td></td>
<td>Gross anatomy of peripheral nerves Optional/4</td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>P-4</td>
<td>EEG/EKG</td>
<td>None</td>
<td>GA-Systemic Circ, Resp, Renal-30</td>
</tr>
<tr>
<td>13</td>
<td>P-6,7</td>
<td>Spirometry</td>
<td>None</td>
<td>Take-home due: EEG/ECG-15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LabTutor Report: Resp Phys-15</td>
</tr>
<tr>
<td>14</td>
<td>P-5,9,10</td>
<td>Cardiovascular physiology-1</td>
<td>None</td>
<td>LabTutor Report: Plethysmography-15</td>
</tr>
<tr>
<td>15</td>
<td>P-5,9,10</td>
<td>Cardiovascular physiology-2</td>
<td>None</td>
<td>In-Lab CV Quiz -15</td>
</tr>
<tr>
<td></td>
<td>P-11</td>
<td>Blood</td>
<td>Yes/4</td>
<td></td>
</tr>
</tbody>
</table>
Acknowledgement of receipt of the syllabus

I, _________________________________, have received a copy of the Human Anatomy and Physiology 2 Laboratory syllabus for Spring of 2011. The date on which I received the syllabus is ___________ 2010. Upon receiving the syllabus I have read it completely. I listened while my instructor, Dr. Richard Simons reviewed the syllabus with me.

Signed ___________________________ Date______________