BSC 182   Human Physiology and Anatomy II

2013

## COURSE INFORMATION AND POLICIES

INSTRUCTOR:  Betsy A. Wargo, D.C.

   Office hours:  I will be in my office on the days we have class.  Please email to set up an appointment.

   Office:   SLB 233

   E-mail:  bawargo@ilstu.edu

  Web Page:   http://bio.illinoisstate.edu/bawargo/

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TENTATIVE LECTURE TOPIC OUTLINE:

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| Topics    | Reading |
| Endocrine System – anatomy, major glands and function of hormones | Chapter 16 |
| Cardiovascular System - composition and functions of blood | Chapter 17 |
| Cardiovascular System - structure and function of the heart;  | Chapter 18 |
| Cardiovascular System - vessel structure; physiology of blood flow  | Chapter 19 |
| Lymphatic system - lymph transport; lymphoid cells, tissues and organs  | Chapter 20 |
| Immunity - innate defenses; adaptive defenses  | Chapter 21 |
| Respiratory System - pulmonary ventilation, gas transport and gas exchange; control of ventilation | Chapter 22 |
| Digestive System - structure; digestion/absorption, metabolism   | Chapter 23 |
| Urinary System - kidney structure; urine formation    | Chapter 25 |
| Reproductive System     | Chapter 27 |
| Pregnancy and embryonic development; birth; neonatal physiology; lactation     | Chapter 28 |

**Scope and Purpose**:  This course is designed primarily for students majoring in health related or other fields requiring a basic understanding of human anatomy and physiology.  The course is the second in a two-semester sequence and has BSC 181 - Human Physiology and Anatomy I (or a comparable course) as a prerequisite.  It is assumed that you have a basic understanding of cell structure, membrane transport, fundamental chemistry, neurophysiology and hormone action as presented in BSC 181 or in another course.  If you do not, a review of the appropriate topics in your textbook is recommended – this is up to you.

The course will deal with those human organ systems not discussed in BSC 181, that is, systems other than the skeletal, muscular, nervous and endocrine systems, which could broadly be considered as **supportive** (skeletal and muscular) and **integrative** in function (nervous and endocrine).  We will consider organ systems that basically function in ***maintenance and are homeostatic in function***.  For example, consistent with its basic maintenance and homeostatic function, the circulatory system provides oxygen and cells of the immune system to body tissues.  The circulatory system therefore has (at least) respiratory, and immune system functions. Our discussion of each of the various body systems individually should not obscure the physiological interactions existing between the various organ systems.  In general, physiological rather than the anatomical aspects of the various organ systems will be emphasized.

**Textbook**: Elain Marieb’s  Human Anatomy and Physiology 9th. Ed., 2013 (required).

**Lab Manual**:  Available at Phi Sigma bookstore  (required)

Reading: You are strongly urged to complete the suggested reading prior to introduction of the topic in lecture.  Given the amount of information provided in your textbook, some topics simply cannot be discussed in detail during lecture.  The objective of the lecture not to provide an alternative to reading the book, but to help you understand the materials that you are required to know.  With that stated; **it will be necessary for you to study portions of the text and associated materials on your own**.  During your individual study, you should strive to become familiar with the general anatomical and (more importantly) the physiological aspects of each topic.  When appropriate, I will identify specific illustrations, tables, and sections deserving more thorough study along with those that can be ignored or given less emphasis.

**Assignments**:  In order to encourage and introduce an Active Study habit, you will be creating quiz questions based on the lecture material.  There will be an assignment associated with each exam.  Your responsibility is to create ten (10) high quality exam questions.   More information regarding format and expectations can be found at the class website.  Through the course of the semester, you will be completing six assignments worth 10 points each.

**Exams**:  Six examinations worth 100 points each will be given.  Your lowest exam score will automatically be dropped from exam 1-5.  It is for this reason that **no make-up exams will be given.**  Exams are **NOT** cumulative.  Exams will be based on material presented in lecture and in your textbook.  Students are encouraged to meet with me to clarify course material or to discuss their class performance.  Course grades will be based solely on exam performance and assignments.  At this time other forms of earning credit (term papers etc.) will not likely be considered, however, I reserve the option of adding extra credit should I feel it necessary.

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**Tentative Lecture Exam Schedule -  dates will be posted on the class calendar**

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| **Exam One/Assignment One**  | **Chapter 16 & 17**  | **Endocrine system and Blood** |
| **Exam Two/Assignment Two**  | **Chapters 18 & 19**  | **Cardiovascular and Circulatory** |
| **Exam Three/Assignment Three** | **Chapters 20 & 21**  | **Lymph and Immunity** |
| **Exam Four/Assignment Four** | **Chapter 22** | **Respiratory System** |
| **Exam Five/Assignment Five** | **Chapters  23 & 25** | **Digestive & Urinary System** |
| **Exam Six/Assignment Six** | **Chapters 27 & 28** | **Reproductive System** |

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Grading Scale:  75% Lecture + 25% Lab

### Percentage                                 Final Grade

90 - 100%                                                   A

80 - 89%                                                     B

70 - 79%                                                     C

60 - 69%                                                     D

less than 60%                                              F

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SOME ADDITIONAL COURSE INFORMATION AND ADVICE CONCERNING ATTENDANCE AND STUDY HABITS

Class attendance.  The single most important factor in determining your success in this course is regular class attendance.  One consequence of missing class is that handouts or other information presented for discussion in lecture may not be available in a timely fashion.  As a result, the non-attending student is at a disadvantage relative to attending student simply because he or she lacks important written information. More importantly, the non-attending student misses the instructor's particular explanations, interpretations and unique emphases on the topics discussed.  The lecture notes that a non-attending student would probably have to copy from an attending student may be little more than a collection of conceptually unconnected phrases or diagrams.  Additionally, attending students hear and understand the discussion of concepts that simply do not appear in their notes.  If you have ever had to use “second hand" notes in other courses you already know what I'm talking about -as there is no substitution for notes you take yourself in class.   As such, I will encourage your active participation by periodically be taking attendance.

Reading - The most effective reading that can be done in this course is reading that is completed **prior** to attending the lecture.  This reading will make the lecture much easier to follow and give you a leg up in mastering a considerable set of new terms, which can be a major hurdle for many students in a beginning science course.  **Re-reading after the lecture** should be done to allow you to reflect upon and reinforce specific information presented in the lecture and to let you appropriately edit your notes.

Note-Taking Study & Review.  Good lecture notes must contain more than just a written summary of information presented by the instructor; they must also contain orally communicated explanations or interpretations.  While an explanation or summarizing statement may have been perfectly clear to you at the time it was given in lecture, it is not likely to be so a few days later, particularly if it is not recorded in your notes. **I will provide templates for the lecture on the website.  The address for my website is provided at the top of this syllabus.**  NOTE: These are not all inclusive notes and you will be expected to attend lecture and expand on what I have provided.

Good lecture notes are useless unless they are thoroughly studied and are nearly useless if they are only studied shortly before the exam.  Studying "to learn and understand" rather than "studying for the exam" is the mark of a successful student.  Here are some suggestions:

(i) Study daily.  Even as little as less than an hour's study of the lecture material presented that same day is far more effective than many times that effort expended just before the exam.  Daily study utilizes your short-term memory of the lecture to reflect upon and reinforce concepts.  Daily study also will allow you to edit and add to your notes intelligently while the lecture is still fresh in your mind.  Once your short-term memory begins to fade with time (over hours and days) you will become increasingly unable to discern the meaning of some item in your notes.  It is crucial that you make additional cross-references between that item and others in your notes or gleaned from your reading.  Edit your notes with this kind of additional explanatory material as soon after the lecture as possible (on the same day is best).

(ii) Practice "active" study.  Reading and re-reading, and highlighting your notes umpteen times is a passive, and not an effective form of study.  To the extent possible, you should attempt to actively quiz yourself or have another student (or me) quiz you.  Formal or informal study groups with up to about five students can be effective if (and only if) they meet at least once a week.  As you study, try to reformulate the statements in your notes as questions.  This more active "quiz" type approach has an additional benefit in that it allows you to immediately find that material that you thoroughly command and concentrate upon the stuff that you do not, thus saving time and effort.

(iii) Don't confuse study with review.   The regular, thorough and preferably active endeavor described above is study.  In contrast, review is a relatively low-level "brushing-up" activity that refreshes the long-term memory's command of the material previously acquired by active study.  Achieving the "regular attendance"/"frequent study - no cram" study lifestyle is not easy.  However, once it is established and becomes a habit, it will serve you well, in this course and all future courses you attend.

Electronic Study Aids – Today most textbooks come with additional study aids in the form of a CD or access to a website.  Electronic aids, such as the website associated with your book, are very beneficial and tend to hold one’s attention.  I encourage you to utilize these materials via your personal computer if you have one.

Lecture Exam Format - Lecture examinations during the semester will require the labeling of diagrams, defining terms and include simple "fill in the blank" questions using a multiple choice format.  As such, you will need to pay close attention to detail when reading your questions and filling in your answers.  Any student needing to arrange a reasonable accommodation for a documented disability should contact Disability Concerns at 350 Fell Hall, 438-5853(voice), 438-8620 (TDD).

**Academic Dishonesty**.  As your instructor I have the professional obligation to ensure that every reasonable effort is made by me to prevent academic dishonesty during the course of the class. This includes exams, assignments, assessment, lecture quizzes, article summaries, etc. You can be assured that I take this obligation very seriously.  If cheating does occur, the incident will be reported to the Chairman of the Department of Biological Sciences and to the Student Judicial Office / SCERB.  I assume that you understand your responsibilities concerning academic honesty and the consequences of not meeting those responsibilities.  Since it is important that you understand those responsibilities and the University's policies on academic dishonesty, I urge you to read the section on Academic Integrity in the Undergraduate Catalog.

Plagiarism: Article summaries that have been plagiarized will earn no credit. You are not eligible for the academic dishonesty sanction for your first episode of plagiarism.

 **Sanctions for Academic Dishonesty (first offense)**

* Grade of 0 (zero) points on the assignment/exam/quiz in question
* A 10 percent (10%) reduction of the final grade, taken after lecture and lab scores have been tallied.
* Students pursuing a teaching certificate will have a Disposition Concerns document submitted

**BSC 182 Lab:**

**BSC 182 Human Physiology and Anatomy II – 2013**

**LABORATORY INFORMATION AND POLICIES**

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**Scope and purpose:** The greater emphasis in the lab will be human anatomy (structure), with some information on physiology (function). The lab will include the use of materials such as models, videos, histology slides, textbook photographs, and diagrams. There is also hands-on dissection of hearts and a fetal pig to learn basic mammalian anatomy; therefore, **it is highly recommended that you** **wear suitable clothing**.

**Lab grade:** The lab grade will contribute to about 25% of the overall class grade.  The total lab grade is 300 pts distributed as explained below:

**-Participation**: You will receive participation points for each lab that you attend and complete.

**-Article summaries** **and Case Studies**:  You will be submitting several article summaries throughout the semester.  These summaries are to cover anything related to anatomy and physiology that you can find in local or national news or publications.  **These are NOT to be journal articles or research articles.**  They should be a summary of the type of news story that can be found in the Pantagraph or CNN.com or FoxNews, or any similar source.

Case studies are being developed and may be assigned throughout the semester.  Due dates will be announced through Blackboard and in lecture.

Article Summary or case study due dates can be found on the class calendar.

**-Lab Evaluations**

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| Total Lab Points |
| Lab quizzes | 4 quizzes @ 50 points each | 200 points |
| Article Summaries  | Two at 15 points each | 30 points  |
| Case Studies/Assessments | Two at 15 points each | 30 points |
| Participation Points | 40 | 40 points |
| **300 points** |

Four lab quizzes each worth 50 points

**Quiz format:** They are practical in nature, and may include dissections, histology slides, models, diagrams, etc. You will be asked to identify body structures and/or answer questions regarding the physiology of the structures. Questions/diagrams will also come from the lab manual.

**The laboratory manual** **(required)**

Lab manual is available from Phi Sigma Honorary Biological Society for $15.00 (Room 101A FHS). The Phi Sigma Bookstore is open weekdays 8:00 am to 3:30 pm for the first two weeks of the semester

**Laboratory Policies for BSC 182**

1. Each laboratory session will begin with a 5-10 minute study/review session on the previous week's laboratory material (this will be determined by your lab instructor *as needed*). You may ask the lab instructor to clarify information from the previous lab as well as review specimens according to availability etc.

2. The laboratory will then proceed to the topic of the current week's lab. The instructors will introduce the topic and provide guidance for your work***. Please read this material in the lab manual and textbook prior to the class period.*** It is important to diligently study this new material because you will be tested over it on the lab exam and this is the opportunity to discuss the material in depth with your instructor.

3. No make-ups for the lab exam will be given without suitable evidence for the missed laboratory provided to your Teaching Assistant. In case of family emergencies such as death or illness, **official documents are required**.

4. Perfect attendance will be rewarded. To obtain these points you ***must remain in the laboratory until permitted to leave by the instructor*.**

5. The total points in the laboratory section are 300 points as mentioned above.  Changes may be made throughout the semester with regard to total points, but your lab score will be determined eventually as a percentage.  This percentage will be 25% of your lecture grade.

6. There will be some limited opportunities for extra credit in the laboratory *if needed.* Specific instructions about this will be provided later in the semester.

7. You may attend ONLY that section for which you have registered. **You will not be permitted to go to another lab section** without specific permission from the lab instructors.

8.  Late policy for lab practicals:  Class policy is that once a lab quiz is turned in, no other lab quizzes will be given out.  If you are late to a lab quiz, you run the risk of not being able to take that quiz.  (See #3 above regarding make-ups)

9 **Plagiarism and Academic honesty**: Make extra sure that everything you write is in your own words and cited. Cheating is unethical and will not be tolerated**.** If cheating does occur, the incident will be reported to the Chairman of the Department of Biological Sciences and to the Student Judicial Office / SCERB.  I assume that you understand your responsibilities concerning academic honesty and the consequences of not meeting those responsibilities.  Since it is important that you understand those responsibilities and the University's policies on academic dishonesty, I urge you to read the section on Academic Integrity in the Undergraduate Catalog.

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**BSC 182 Human Physiology and Anatomy II - 2013 Lab Schedule
This schedule is tentative. Refer to the class calendar online for finalized versions.**

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| **For the week of**  | **Lab topic /Exercise**  |
| Week one  | Microscope review and Endocrine slides |
| Week two | Blood and Blood Typing |
| Week three  | Lab Quiz One |
| Week four    | Cardio Structure/Heart dissection |
| Week five            | Cardio/EKG |
| Week six  | Blood Vessels |
| Week seven       | Lab Quiz Two |
| Week eight      | Lymph  |
| Week nine  | break |
| Week ten  | Respiratory |
| Week eleven  | Digestive |
| Week twelve  | Lab Quiz Three |
| Week thirteen | Kidney |
| Week fourteen  | Fetal Pig |
| Week fifteen      | Reproductive |
| Week Sixteen           | Lab Quiz Four |