

Human Anatomy and Physiology II
Biology 221 Online Summer 2009
Class Prerequisites/Corequisites: Biology 220/220L

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You are welcome to call us any time, although we'd prefer not after 9 pm unless it's a situation requiring an immediate solution. **If there's a change in our locations for more than a day or two it will be posted on the course web page.** It is important that you check our location before trying to call, since we will be available at different locations at different times during the summer. We do not have or use voicemail.

I. Course Description:

This is a general overview of the course and the activities in it. A detailed listing of topics and activities follows. Our study of Human Anatomy and Physiology involves a number of different types of learning activities. The course activities may be divided into the following four areas- study modules, examinations, case history files, and lab activities. All activities are completed at a location of your choosing. There are no requirements for on-campus visits. **Permission to take both courses during the same semester or summer session must be obtained during a discussion with the instructor prior to registration for the second course.**

Study Modules: A study module for each chapter of the text is available on our website. Each module consists of two parts. The first activity to be completed is a written study guide (SG) in a Microsoft Word format. There are different activities intended to assist you in your understanding of the material. The study guides consist of three different areas. They are

- a. A short summary or introduction to the chapters in the text.
- b. A list of the major learning objectives for the chapter.
- c. A series of questions will help you learn essential materials and will give you the opportunity to demonstrate your understanding of concepts or principles addressed in the chapter.

When you've completed the study guide and are satisfied that answers provided are correct, you'll submit it to us using the dropbox tool. When the computer recognizes the submission, it will make the second part, a chapter mastery quiz (CMQ), available to you. CMQs are not visible under the quizzes section until you have submitted to the dropbox. It is an open-book activity, in which you may use any resources available to determine the correct answers. When it is submitted, the computer will grade the quiz and give you a score. You will be able to determine which questions are incorrect or partially correct by looking at the points awarded for each question. It will not give you the correct answer. You may then study the material further and retake the quiz. A total of three attempts on each quiz may be made. Some of the questions are fill-in-the-blank or short answer/essay. Each quiz is checked by one of us as the automatic grading system has limitations in recognizing correct answers..

Integrated Laboratory Activities. A series of lab activities have been designed which will allow you to experience some of the activities available to on-campus students. Some of the materials needed will be sent from the bookstore (lab kit). Other materials will be things commonly found in a kitchen. We'll provide specific instructions in their use in the content area of Moodle, so there'll be no need to purchase a lab manual. Some of the lab activities will be simulations which you will be able to run on your computer, and for a few, we will send micrographs taken in the lab for you to interpret. Depending upon the labs, there will be

either written lab reports or lab quizzes to be completed. Lab reports for the activities should be completed and returned to us through the dropbox for evaluation. Lab quizzes are completed online using Moodle. Some labs contain both activities.

Case History Files: You will also receive a case history file describing a patient whose symptoms arise from maladies of the organ systems which you've been studying. You will answer a series of questions which will give you the opportunity to display your understanding of the material which you have learned.

Proctored Objective examinations: Objective exams will consist of multiple-choice questions which will be available by logging into the website at <http://ndus.mrooms2.net/course/view.php?id=264> with your computer. Your proctor will be sent the passwords for each exam. These exams are not open-book/open notes exams. They are intended to be taken in the same way as any normal "on-campus" exams in which your only resource is your personal learning. The server will send the exam to your location for you to complete online and submit. It will grade the exam and allow you to view the results immediately. The three exams plus a comprehensive final will be available to you when you are ready for them, having submitted the prerequisite activities such as study guides, chapter mastery quizzes and lab reports or lab quizzes.

A detailed list of assignments with the recommended due dates is available on the website at the Checklist link on the right side of the navigation bar.

Your goal should be to complete an average of a chapter per week. This will mean completion of the study guides, labs associated with the chapters, and the appropriate exams and case history files. Some chapters are relatively short and can be mastered in a short time, while others will present some significant challenges. You'll also need to allow for review time prior to completing the examinations. It is important to work on the material for shorter periods on a daily basis rather than do a single "cramming" exercise once per week. You will retain much more of the material and do better on the exams.

II. Purpose of the Course:

During this semester, we will study the types of control of the body that are provided by the endocrine system. We will also study the transport systems, and the energy absorption and related systems. We will conclude with an introduction to human reproduction, growth and development, and genetics.

III. Goals and Objectives: The topics covered by the course are listed below, along with the instructional tools which will be used to help you learn the material.

A. Course Content:

Ch 13 Endocrine System

- General Characteristics, Hormone Action, Hormone Control, Pituitary Gland, Thyroid Gland, Parathyroid Glands, Adrenal Glands, Pancreas, Other Endocrine Glands, Effects of Stress, Life-Span Changes
- Study Guide, Chapter Mastery Quiz, Interactive Physiology CD, downloadable animations, lab quiz

Ch 14 Blood

- Blood and Blood Cells, Blood Plasma, Hemostasis, Blood Groups and Transfusions
- Study Guide, Chapter Mastery Quiz, , downloadable animations

Ch 15 Cardiovascular System

- Structure of the Heart, Heart Actions, Blood Vessels, Blood Pressure, Paths of Circulation, Arterial System, Venous system, Life-Span Changes

- Study Guide, Chapter Mastery Quiz Cardiovascular Lab and Quiz, Interactive Physiology CD, downloadable animations

Unit 1 Exam Ch 13, 14, 15

Ch 16 Lymphatic System and Immunity

- Lymphatic Pathways, Tissue Fluid and Lymph, Lymph Movement, Lymph Nodes, Thymus and Spleen, Body Defenses, Life-Span Changes
- Study Guide, Chapter Mastery Quiz, Lymphatic and Immunity lab report, downloadable animations

Ch 17 Digestive System

- General Characteristics, Mouth, Salivary Glands, Pharynx and Esophagus, Stomach, Pancreas, Liver, Small Intestine, Large Intestine, Life-Span Changes
- Study Guide, Chapter Mastery Quiz Digestive Lab and Quiz, Interactive Physiology CD, downloadable animations

Ch 18 Nutrition and Metabolism

- Why We Eat, Carbohydrates, Lipids, Proteins, Energy , Vitamins, Minerals, Healthy Eating, Life-Span Changes
- Study Guide, Chapter Mastery Quiz

Case History File

Unit 2 Exam Chapters 16, 17, 18

Ch 19 Respiration

- Why We Breathe, Organs, Breathing, Control, Gas Exchanges, Gas Transport, Life-Span Changes
- Study Guide, Chapter Mastery Quiz, Respiratory Lab and Quiz, Interactive Physiology CD, downloadable animations

Ch 20 Urinary System

- Kidneys, Urine Formation, Elimination, Life-Span Changes
- Study Guide, Chapter Mastery Quiz Urinary Lab, Report and Quiz, Interactive Physiology CD, downloadable animations

Ch 21 Body Balances)

- Distribution of Body Fluids, Water Balance, Electrolyte Balance, Acid-Base Balance
- Study Guide, Chapter Mastery Quiz, Interactive Physiology CD , downloadable animations

Unit 3 Exam Ch 19, 20, 21

Ch 22 Reproductive System

- Organs of the Male Reproductive System, Organs of the Female Reproductive system, Birth Control, STD's
- Study Guide, Chapter Mastery Quiz Reproductive Lab Quiz, downloadable animations

Ch 23 Pregnancy: Growth and Development

- Pregnancy, Prenatal Period, Postnatal Period, Aging
- Study Guide, Chapter Mastery Quiz, Pregnant White Rat Lab Report, downloadable animations

Ch 24 Genetics and Genomics

- Use in Medicine, Modes of Inheritance, Gene Expression, Complex Traits, Matters of Sex, Chromosome Disorders, Gene Therapy

- Study Guide, Chapter Mastery Quiz, Genetics Lab and Report, downloadable animations

Comprehensive Final Exam

B. Instructional Strategies : The following instructional strategies will be employed to help you learn the material.

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|--------------------------------|-------------------------|
| • Direct instruction | • Application |
| • Indirect instruction | • Inquiry approach |
| • Interactive instruction | • Simulations |
| • Experimental learning | • Questioning skills |
| • Guided and independent study | • Case Histories |
| • Chapter Exams | • Downloaded animations |

C. Materials Required

Text and Lab Manual: Hole's Human Anatomy and Physiology 11th Ed.; Shier, Butler, & Lewis, McGraw-Hill Publishing

We will utilize Moodle (<http://ndus.mrooms2.net/course/view.php?id=264>) to distribute study guides, lab procedures and other printed materials. It will also be used to administer exams and the lab quizzes. **There is no lab book required.**

A lab fee of \$15.00 has been assessed to partially defray the costs of some of the laboratory materials which are used during the course. Other lab materials are purchased as a **lab kit** through our bookstore. **You should order the lab kit and any other materials needed as soon as you register for the course.**

Lab Materials: Specimens and other materials needed for lab activities will be shipped to you at the beginning of the semester along with the text book if you've purchased it from our bookstore. If you have the book from some other source, you will still need to contact the bookstore for the required lab materials. Lab procedures, which you will download from the Moodle website, have primarily been written using Microsoft Word.

(Note: If you have Word on your computer, you should be able to work on the documents with no difficulty. If you use another word-processing program which does not have the translator for Word documents, the instructor will attempt to provide you with the documents in a form which you can use. As a student, you are eligible to purchase the Microsoft Office Suite (Educational Version) for approximately \$150. It's REALLY worth the price!) We will utilize Moodle to electronically distribute study guides, laboratory procedures and other printed materials. One other option is to download the OpenOffice suite (<http://www.openoffice.org>), which is free and very similar to Office.

Interactive physiology CD: The A.D.A.M. 10-module interactive physiology CD is available from the University Bookstore (www.mayvillestatebookstore.com), and will be shown in the Course Materials area. It is required, and will provide the basis for a number of questions in the examinations.

Camera: A camera is needed to record lab activities including dissections. This documentation and illustration is required in order to receive credit for lab activities where photos are requested. A digital camera is best, but traditional photos may be taken and scanned for email or sent to the instructors' by regular mail. If taking traditional photographs, it is necessary that you complete the labs and send the photos in a timely manner to get credit for your work.

D. Learning Experiences

- Individual assignments
- Read textbooks.
- Complete assigned Study Guides, Labs/Reports, Chapter Mastery Quizzes

- Utilize downloaded animations as available for the varied topics
- Complete case studies utilizing information and processes provided throughout the course
- Utilize appropriate learning modules on Interactive Physiology CD
- Complete available practice examinations on the course website to review and learn anatomical features

IV. Evaluation/grading: Your grades will be based upon the following four types of activities. The number of points that are possible during each activity vary greatly. However, each type of activity is worth a distinct percentage of the total grade for the course. Within the activity types, the value of the individual activities varies, based primarily upon the significance of the material and the amount of effort required to complete it. The values of each activity are shown in the gradebook of the website.

- A. Study Guides and Chapter Mastery Quizzes:** Written study guides are distributed via the course website. These are to be completed and returned digitally in the drop-box. They will be examined and grades entered in the Study Guide portion of the grade book. The written study guides are the primary instrument which you will be using to learn the material. The questions are very basic, intended to help you acquire knowledge. These written study guides constitute 11% of your total grade. When the study guide has been submitted, the chapter mastery quiz or CMQ (use the “quizzes” link) will become available. You may take the chapter mastery quiz up to three times, with the best score being recorded. It’s a good idea to wait until we’ve checked the quiz “manually” for errors by the automatic correction system before you take it again. There will be a note in the initial “feedback” box when we have finished correcting it manually. You will be able to see your answers, and whether or not they’re correct. The correct answers will not be given. **These chapter mastery quizzes make up 30% of the grade.**
- B. Labs, Lab Reports and Lab Quizzes:** During the course, a number of different lab exercises will be completed. There are accompanying lab reports and other materials on the website which must be completed. Evaluation of your labs will be by either lab reports placed in the appropriate drop-box folders or by lab quizzes found under the “Quizzes” link. Some labs will have both activities. Lab activities are worth 25% of the total course grade.
- C. Case History Files:** You will be provided with a case history file to be completed. It contains sets of symptoms of a person whose ailments are related to materials you’ve just finished studying. You’ll be asked to determine what their disease or ailment is. It is 5% of the total grade.
- D. Tests and Final Exam:**
- 1. Exams** Three examinations will be given during the course as noted on the checklist. Each exam will cover three chapters within the text. Objective exams will consist of multiple-choice questions or fill-in-the-blank questions which will be available through the MOODLE website. The questions will be based upon material found within the text, within some lab materials, and on materials found in the practice exams. Passwords which will allow you access to the exams will be sent to your proctor. All exams may be cumulative, and will contain questions related to the material which you’ve covered. **In order for the exams or the final exam to be available, all assignments (including labs) due prior to the exam must have been completed or attempted at least once.**
 - 2. Final Exam:** Approximately half of the material in the final will be devoted to topic related to the nervous system and the somatic and special senses. The remainder will be taken from all other materials examined during the course. The final exam will consist of questions covering all material studied during the semester. It will probably have 125-150 questions. Exams and the final exam make up 40% of your grade.

Note: you will need to arrange a proctor for your exams. **Proctors must be present for the entire duration of all Exams.** Passwords will not be provided to a student outside of the

monitored exam setting.

- E. **Final Grade:** Your grades will be based upon the study guides and chapter mastery quizzes (30%), lab reports (25%), case history files (5%), and examinations (40%). The scores for each of the assignments has been individually weighted to correspond to their complexity and difficulty. Your individual scores will be visible in the grades area. In order to get an "A", you should achieve an overall percentage of 88%, and to get a "B", 75% overall. A grade of "C" requires 65%.

V . English Proficiency and other Academic Concerns

The State Board of Higher Education requires that all faculty members and teaching assistants in the NDUS have appropriate communications skills, including the ability to speak English clearly and with good pronunciation. Students who experience problems have the following obligation:

1. Discuss the situation with the instructor to see if resolution can be reached.
2. If the problem is still not resolved, contact the instructor's Division Chair for assistance.
3. Situations still not resolved should be brought to the attention of the Vice President for Academic Affairs.

Student → Instructor → → Chairperson → → → VPAA

In the unlikely event that a situation has not been resolved through this procedure, students may contact the President of the University for final resolution.

- VI. **Students with Disabilities:** If you need accommodations in this course because of a disability or if you have emergency medical information to share, please inform your instructor as soon as possible. Students needing disability accommodations must submit documentation of the disability to Greta Kylo, Coordinator of Academic Support, phone 800-437-4104 ext. 34720.

VII. Academic Honesty *"Academic integrity is of the utmost importance."*

Definitions: Academic dishonesty consists of cheating on tests, quizzes, oral presentations, general coursework, fabrication of data, and plagiarism. Academic dishonesty also includes allowing someone else to copy your work (including computer programs, study guides and exams, research data, or any other assignment) and submit it as his or her own. Plagiarism is representing the words or ideas of another as one's own in any academic endeavor.

Examples: This includes, but is not limited to, the following:

- Copying another student's assignment (**exams, mastery quizzes, study guides, case histories**, either as hard copy or electronic files),
- Working with another person when both submit similar work to satisfy an individual, not group, assignment.
- Using an author's writing without proper documentation or reference, whether intentional or unintentional, (**plagiarism**).
- Copying any source, book, periodical, database, or computer program without proper credit, whether quoted, paraphrased, or summarized.

Consequences: When a student commits academic dishonesty, he/she may be answerable to one or more of the following consequences:

- receive an "F" for the assignment with no opportunity to redo it,
- receive an "F" for the course, and
- referral to the Vice President for Academic Affairs for further disciplinary action.