

COURSE INFORMATION AND POLICIES

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OFFICE HOURS: As posted and by appointment.

TEXTBOOK: (REQUIRED) *Anatomy and Physiology—The Unity of Form and Function (Fifth edition)* by Kenneth S. Saladin with accompanying *Anatomy and Physiology Revealed* CD and *Clinical Applications Manual* by Colleen Nolan and Kenneth S. Saladin (packaged together in bookstore)

STUDY GUIDE: (OPTIONAL) *Student Study Guide to accompany Anatomy and Physiology—The Unity of Form and Function*, by Kenneth S. Saladin

LAB MANUAL: (REQUIRED) *Human Anatomy and Physiology Laboratory Manual (Cat Version)*, (Ninth edition) by Elaine N. Marieb

CLICKER: (REQUIRED) *Turning Technologies* XR (or RF) model response card.

RESOURCES: Several resources pertinent to this course are available to you:

- 1) **Online Learning Center** (<http://www.mhhe.com/saladin>) is provided by the textbook publisher. It includes, among other things, interactive study modules for your review. In addition, the MediaPhys CD-ROM (also provided by the textbook publisher) provides additional explanations, figures, and animations to supplement the text.
- 2) **Textbooks, histological/anatomical atlases, study guides, and other printed references** are available for reference and provide supplemental information about material presented in lecture and the laboratory. Additional material is shelved in the Human Anatomy and Physiology Laboratory in Mendel (Mendel 087) and through the instructors.
- 3) **Website for the course** (<http://WebCT.villanova.edu/>). We will post most **handouts for lecture and lab** on this site, as well as some study guides and the **Answer keys to Review Sheets** and other study material (e.g., **special "Reviews"**). Please check the course website periodically for important updates. Access from My Courses on the Villanova homepage or by logging in to WebCT directly
- 4) **Videotapes** shown during the semester are available from one of the instructors upon request.
- 5) **Interactive CDs** designed as study guides are on reserve in the Instructional Media Services room in Falvey Library. These CDs contain animations of several concepts in the course as well as quiz questions on the material.

INTRODUCTION: A course in Human Anatomy and Physiology is a cornerstone of programs in the medical, nursing, or the allied health fields. A basic knowledge of anatomy and physiology is

essential in order for you to understand the many clinical situations you will face in your chosen health care profession. In addition, because medicine relies heavily on the results of analyses and monitoring systems, the health care professional must feel comfortable collecting and interpreting physiological data.

Human Anatomy and Physiology II (Biology 1206) continues the systems-based approach to human anatomy and physiology begun in Biology 1205. We stress the relationship between structure and function in both lecture and laboratory settings, and survey all of the major systems in the human body over the course of the two semesters. Biology 1206 concentrates on the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.

To prepare for the semester, the student should read the introductory pages of the books assigned for the course. Particular attention should be given to the **Preface** and **Guided Tour** in the textbook and the prefatory material in the laboratory manual (including the prologue entitled **Getting Started—What to Expect, the Scientific Method, Scientific Notation, and Metrics**).

Formal instruction includes one lecture section and smaller laboratory sections (approximately 18-24 students each). The lecture section meets MW at 3:00 p.m. in Mendel 154. The laboratory sections each meet once per week in Mendel 087 according to the following schedule:

Section 001	T	8:30-11:20	Section 004	R	8:30-11:20
Section 002	T	1:00-3:50	Section 005	R	1:00-3:50
Section 003	W	8:30-11:20	Section 006	F	8:30-11:20

- NOTE:** 1. Please refer to the schedule for when the laboratories begin.
2. The usual rules and regulations governing laboratory conduct will be followed; please refer to the handout entitled *Laboratory Regulations for Biology 1205-1206*.

Please note that several laboratories make use of preserved specimens. Please read carefully the **Statement on Animal Use in Biology Teaching** below, and sign the appended statement.

ATTENDANCE: Attendance is expected at all lectures, and is required in the laboratories. We consider lectures an essential part of the course, and will keep track of your attendance. The laboratories are an essential part of the course; therefore, attendance will be taken in every section. **In order to be excused for an absence, the student must inform the instructors BEFORE the section or as soon as possible (in some cases, a written explanation for the absence and, if requested, supportive evidence will be needed).**

We will make an effort to accommodate students with an excused absence from lab. For excused absences, students are expected to make-up the laboratories during the same week if possible; because many sections are already full, such crossing of sections is permitted only with the prior consent of the instructor.

Note that **if the student is not excused and the absence occurs on the day of a scheduled lecture exam, laboratory quiz and/or graded lab assignment, he or she will receive a 0 for the item.** In addition, **students will NOT receive credit for a quiz on material covered in a laboratory missed due to an unexcused absence.**

SPECIAL NOTE: Please note that travel plans are not an acceptable excuse unless it is for a university-supported event (e.g., SNAP conference; athletic competition). In such cases, a supporting letter will be required.

INCLEMENT WEATHER: If inclement weather leads to a delay in the start of morning classes and therefore your morning A&P lab, you are expected to report to lab at the announced start time. Lab activities may be modified reflecting the shortened time frame, but quizzes will be administered if scheduled for that lab session. If classes are cancelled so that the entire section is missed, a make-up laboratory session may be scheduled on Friday of that week at 2:30 pm to permit completion of

required work.

If inclement weather occurs on the day of a scheduled exam **and** evening classes are canceled by the University, the exam will be re-scheduled to the following Tuesday evening. If poor weather does not lead to a University decision to cancel evening classes but we deem it too hazardous for commuter travel, we may choose to re-schedule the exam. This kind of decision will be made no later than 5:30 pm on the evening of the scheduled exam and all students will be notified *via* email. Please be sure to check your Villanova email account for any information on changes in exam or lab schedules due to inclement weather.

GRADING and EXAMINATIONS: The grade in this course will be based on your performance in lecture and laboratory. A total of 450 points will be awarded.

Three exams and a final will account for 355 points. The first three exams will be given on Tuesday nights during the term. Exams cover material presented in both the lecture and laboratory, and will include any combination of multiple choice, short answer/essay, and fill-in questions. **Please bring only pencils to the exam; all other personal effects (purse, backpack, hats, and preferably cell phones) are best not brought.** If you must bring a cell phone, **it and other electronic devices must be turned off and kept out of sight during the exams.**

The exams are tentatively scheduled as follows:

Exam	Date	Day	Chapters in Textbook	Exercises in Lab Manual	Points
1	2/9	T	18, 19, 20 (blood vessels)	29, 30, 31, 32	80
2	3/16	T	20, 21 (part), 22	32, 33A, 36, 37A	80
3	4/13	T	23, [24], 25	38, 39B, 40, 41A	80
Final	5/4 10:45-1:15	T	21 (part), 23 (part), 27, 28 Cumulative questions (earlier Chapters)	42, 43 (earlier labs)	115

The final **95** points will be awarded in the laboratory based on your performance on a lab practical, quizzes, and assignments (drawings, data sheets, writing assignment) as follows:

Data Sheets	20 ¹
Quizzes	60 ²
Clinical Case Study	15 ³

¹ Four data sheets, each worth 5 points, will be completed over the term. Data Sheet 1 will be completed in Laboratory 3, Data Sheet 2 in Laboratory 4, Data Sheet 3 in Laboratory 6, and Data Sheet 4 in Laboratory 9. Data sheets are designed to facilitate data collection for the laboratory, and therefore will typically be completed during the laboratory. In some cases, data sheets may be completed after lab.

² Six quizzes (10 points each) plus a Histology practical (10 points) are scheduled. Quizzes are based on material in the previous laboratories and, in some cases, the current laboratory. Completing the RS for the labs covered is an excellent way to prepare for the quizzes and histology practical, and the exams as well. The keys to these RS are on reserve. You will be able to drop the lowest of the six quizzes. Please see the handout entitled, LECTURE and LABORATORY SCHEDULE, for the schedule.

³ The Clinical Case Study will provide an opportunity to apply your knowledge of the body systems covered in the course to a clinical situation. Students will work in groups. The grade will include two elements. First, the group will prepare a "clinical case card" for the particular disorder, which will be distributed to the rest of the class (8 points). Second, the group will present the clinical case to the rest of their lab section, in which they will describe and explain the anatomical and physiological background of the disorder (7 points). We are currently planning to ask a question on the final related to the clinical scenario exercises. To help you prepare for any questions we might ask, we will make all of the cards available to all of the students in the course. All questions will be based directly on the information on these cards and reinforced in the presentations in lab.

Questions in Lecture – “Borderline points”. We will ask questions in most lectures to assess your comprehension of the material that we are presenting. We will be using TurningPoint clicker technology to track and record your answers to these questions. Therefore, we will know how many of the questions you answered (plus how many were correct), as well as whether or not you are attending lecture. If you have exemplary attendance and answer the questions, it may help if you are near the borderline for the next highest grade (especially if you answered them correctly). *Each student will register and use their own clicker; by signing the statement on the last page here, you agree to use your clicker only, to answer yourself (except in cases where allowed to work with others) and to never use another clicker or to act on behalf of another student.*

The following scale will be used for determining letter grades on the exams and will serve as a guideline for assigning the final course grades:

90% and higher	A and A-	67% - 69.9%	D+
87% - 89.9%	B+	63% - 66.9%	D
83% - 86.9%	B	60% - 62.9%	D-
80% - 82.9%	B-	less than 60%	F
77% - 79.9%	C+		
70% - 76.9%	C		

NOTE: *We will NOT curve individual exams; rather, we will adjust the above grade scale only at the end of the term and only if the final distribution of grades warrants an adjustment.*

MAKE-UP TESTS: Make-up exams will be given at the discretion of the instructors and will be given only in the case of an EXCUSED absence (see section above entitled ATTENDANCE).

PLEASE NOTE:

1. The format of the make-up exams may be different from that of the regularly scheduled exams (e.g., entirely or partially essay questions and/or given orally).
2. The make-ups for the exams in the first half of the course will be given around midterm time and those for the second half will be given on the Reading day in May.

ACADEMIC INTEGRITY: We expect you to uphold the University policies on academic integrity and to behave honestly at all times. Any violation of these standards will not be tolerated. We are prepared to assess the maximum penalty (an "F" for the course). Please read the appropriate sections in the Blue Book and the Enchiridion of the College of Arts and Sciences, both of which explain the policies and penalties for dishonesty.

STUDENTS WITH SPECIAL NEEDS: It is the policy of Villanova to make reasonable academic accommodations for qualified individuals with disabilities. If you are a person with a disability, please contact us after class or during office hours and make arrangements to register with the Learning Support Office by contacting Nancy Mott (610-519-5636; nancy.mott@villanova.edu) as soon as possible. Registration with the Learning Support Office is required in order to receive special accommodations.

AUDIT STATUS/AUDITING THE COURSE: Students may audit this course with the consent of the instructors, and are subject to the policies of the College of Arts & Sciences. Typically the audit status is arranged before the end of the drop/add period (the first week of class); in some cases, however, consent to convert to Audit status after the deadline may be possible, but only with explicit approval of the instructors and the Dean's Office (either in the College of Nursing or College of Arts & Sciences). As stated in the policy, the student must attend and participate in lectures as expected of all students. Please note that failure to comply may result in having to drop the course. Attendance in lab is optional. Auditors will not be responsible for completing assignments or examinations, although they are welcome to if they so choose.

No academic credit is earned for auditing; however, the student will receive an “AU” for the course on their official transcript.

PREPARATION:

The best advice is to stay up to date on all of the material!

For each topic presented in lecture, we suggest that you:

1. **Read the assigned chapter before coming to class.** Make special note of the section *Chapter Outline and Objectives* at the beginning of each chapter, the figures and tables throughout the chapter, and the emboldened terms (and their definitions and usage) throughout the text. This will provide an invaluable overview of the material to be covered in lecture, and will introduce you to the concepts and terms that will be discussed. You may find it useful to take notes on the reading, but do not feel compelled to. We suggest that you take notes when you read the chapter a second time after attending the lecture(s) on the chapter. Make and label simple line drawings.
2. **Attend the lecture and laboratory sections and take notes.** The lectures and laboratories will define the material for which you will be held responsible. Use the lectures and laboratories for clarification of material. Take brief notes - do not attempt to reproduce the lecture material verbatim; **if you have familiarized yourself with the material in the textbook before coming to lecture, it will be much easier to take notes.**
3. **Reread the chapter.** Expand your lecture notes by adding detail from the textbook on the topics covered in lecture and laboratory. Learn the key terms, and try answering the questions scattered throughout the chapter. Refer to the *Selected Clinical Terminology* and the *Chapter Review* sections at the end of the chapter.
4. **Test yourself on the material!** Use the many of the resources available (e.g., the *Review Questions* at the end of each chapter, the Study Guide, computer tutorials, interactive CDs, the "Review Sheets" in the lab manual, special "Reviews" we will provide). Such resources, which often prompt you with a question, are excellent ways to assess whether you understand the material covered. Most importantly, they will diagnose what you need to study.
5. **Use the additional resources available on-line or on webCT,** as needed.
6. **ASK QUESTIONS!!** We actively encourage questions! The staff is committed to helping you. We are happy to answer questions pertaining to the course material, and are especially pleased when the questions indicate that you are thinking about the material! In addition to office hours and time during and after laboratory, you will have an opportunity to ask questions during review sessions which we will hold before every exam; the review sessions will be run as open question/answer sessions, and therefore will last for as long as there are questions.

Many students are concerned that their question might be a “stupid” question. No question pertaining to the content of the course is a “stupid” question. **Please ask this kind of question!!** However, questions such as “Why do we need to know this?” and “Will we ever use this?” are stupid questions. **Please refrain from asking these questions!** Remember that knowledge will empower you in whatever you choose to do!

Prepare for the laboratory by reading the assigned exercises in the Lab Manual and related sections of the textbook BEFORE COMING TO LAB. It is important to have an understanding of what will be done in the laboratory before coming to class. Bring your laboratory manual to each session.

PLEASE BE ON TIME!

**VILLANOVA UNIVERSITY
DEPARTMENT OF BIOLOGY**

STATEMENT ON ANIMAL USE IN BIOLOGY TEACHING

Many people, including students and professional biologists, share a concern for the use to which animals are put in the context of teaching. In this course it will be necessary to carry out one or more exercises that make use of preserved or living animals. Such use of animals in teaching is an integral part of the biology experience and as such has been designed to fit in with the overall aims and goals of the course. For this reason, students generally will not be excused from participating in those laboratories involving the study of living or preserved animals. If you object to these types of exercises please see the Chairman of the Department of Biology immediately to discuss your concerns and be prepared to take another course.

You may be required to perform dissections or observations on preserved specimens. Some of these animals may have been collected during the course of scientific or educational fieldwork. In this case these specimens will have been obtained legally and their care (in the case of living animals) or method of sacrifice and preservation will have been in accordance with ethical policies of appropriate institutional governing bodies and any applicable local, state, or federal guidelines. Other specimens have been obtained from reputable supply houses that follow regulated guidelines for the humane sacrifice and preparation of the animals. In some other cases the lab exercise may involve the use of freshly killed animals. You need not participate in killing the animals yourself; all such animals will be killed in accordance with regulations designed to minimize their suffering. Although you may regard certain animals (such as mammals) as being more "important" or worthier of protection than others, all animals have intrinsic value and they should be treated accordingly. In this lab we recognize and respect the value of all living things.

The primary reason for using animals in the lab is related to their value in experiential learning. The structure and function of tissues, organs and systems of organs within animal bodies are extremely complex. Without the first-hand experience of locating and manipulating muscles, bones and organs within the three-dimensional framework of the real organism it is impossible to fully appreciate the complexities of animal form and function. Since attaining knowledge of the way in which animals "work" is one of the goals of the laboratory, your instructors believe that the use of preserved and/or fresh specimens is imperative to your learning and appreciating the material dealt with in this course. Diagrams and other materials are also used in the course and are useful adjuncts to real animals, but they cannot substitute for them. By analogy, someone can tell you the rules of chess or baseball, but without the experience of watching a game the rules are abstract concepts and without playing yourself it is difficult to appreciate the game or to truly understand its intricacies.

Please read and sign both parts of this form after you have examined the course syllabus.
Submit the signed form to your laboratory T.A or one of the instructors within 10 days.

I have read the handouts **COURSE INFORMATION AND POLICIES** and **LABORATORY REGULATIONS** for this course and understand all of the policies explained therein. Further, I agree to abide by the policies of the course, and understand that, if I do not, I will be subject to the consequences.

_____	_____
Signature	Date
_____	_____
Name (Printed)	Section

ACKNOWLEDGMENT OF ANIMAL USE POLICY

I have read and understand the **Department of Biology Statement on Animal Use in Biology Teaching**.

Name (printed)	
_____	_____
Signature	Date

Lec	Date	Lecture Topic	Laboratories
1	1/11	Ch 18 Introduction; Blood-Formed Elements & Plasma	<u>Laboratory 1</u>
2	1/13	Hemopoiesis and Hemostasis	29: Blood
	1/18	Martin Luther King Day (no lecture)	<u>Laboratory 2</u>
3	1/20	Ch 19 Hemostasis (end); Heart Anatomy	30: Heart Anat. ANAT List, Q1
4	1/25	Heart Anatomy; Cardiac Circuit	<u>Laboratory 3</u>
5	1/27	Intrinsic Conduction System/Electrocardiography	31: ECG HDT, DS1
6	2/1	Cardiac Cycle/ Cardiac Output	<u>Laboratory 4</u>
7	2/3	Ch 20 Regulation of Cardiac Output	32: Blood vessels ANAT List, Q2
8	2/8	Circulatory Anatomy/ Hemodynamics	<u>Laboratory 5</u>
	2/9 eve	Exam #1: Ch. 18,19,20 (blood vessels); Ex. 29, 30, 31, 32	33A: Blood Press. DS2
9	2/10	Hemodynamics/Blood Pressure Regulation	
10	2/15	B.P. Regulation (end); Capillary Structure and Function	<u>Laboratory 6</u>
11	2/17	Capillary Structure and Function (end)	36: Anat. Respir. ANAT List, Q3
12	2/22	Ch 21 Anatomy of the Lymphatic System, Lymphatics	<u>Laboratory 7</u>
13	2/24	Ch 22 Lymphatic Organs; Respiration: Mechanics	37A: Phys. Respir. DS3
2/27 - 3/7 SEMESTER BREAK			
14	3/8	Gas Exchange; Transport of Gases in the Blood	<u>Laboratory 8</u>
15	3/10	Transport (cont.) and Control of Respiration;	38: Anat. Digest. ANAT List, Q4
		Ch 25 Introduction to Digestion	
16	3/15	Alimentary Canal I – Anatomy & Physiol.	<u>Laboratory 9</u>
	3/16 eve	Exam #2: Ch. 20, 21 (part), 22; Ex. 32, 33A, 36, 37A	39B: Phys. Digest. HDT, DS4
17	3/17	Alimentary Canal II – Anatomy & Physiol.	
18	3/22	Alimentary Canal III – Anatomy & Physiol.	<u>Laboratory 10</u> Histol. Q
19	3/24	Control of Digestion	Clinical Case Study Presentation
20	3/29	Ch 23 Urinary Anatomy & Physiology I	
21	3/31	Urinary Anatomy and Physiology II	
4/1- 4/5 EASTER RECESS			
	4/6	Labs begin Tuesday →	<u>Laboratory 11</u>
22	4/7	Urinary Anatomy and Physiology III	40: Anat. Urinary ANAT List, Q5 41A: Urinalysis
23	4/12	Ch. 27 Urinary (end)	<u>Laboratory 12</u>
	4/13 eve	Exam #3: Ch. 25; 23 (part), [24]; Ex. 38, 39B, 40, 41A	42: Anat. Reprod. ANAT List
24	4/14	Ch 28 Immune System I	
25	4/19	Ch 21 Immune System II	<u>Laboratory 13</u>
26	4/21	Immune System III; Male Reproductive System	43: Phys. Reprod. Q6
27	4/26	Male (end); Female Reproductive System	
28	4/28	Reproduction (end)	
	4/30	Reading Day	
TBA		FINAL - Ch. 21 (part), 23 (part), 27, 28; Ex. 42, 43; and cumulative questions	

Key – ANAT List - List of anatomical terms; Q - quiz; DS - data sheet; HDT - handout. Items in **bold** type contribute to your grade.

* Please note that the schedule of lectures and activities in the laboratory are subject to change. We will announce any significant changes as they are made.