TIPS ON HOW TO SUCCEED IN ANATOMY AND PHYSIOLOGY

Rebecca B. Benard, Ph.D.
Instructor BIOL 116 and 117

Welcome! The first year of college is filled with many challenges. During this time I see tremendous intellectual and personal growth in students. Below are some tips I have collected over the years to help students transition into his/her first semester of A & P.

Academic Responsibility: College students are expected to take responsibly for their education. I am here to help guide you, but the success of your education is largely in your own hands. It takes self-motivation and discipline to attend class, study and take care of yourself.

The Syllabus: When the syllabus becomes available on Blackboard (blackboard.case.edu) you should read it cover-to-cover and very carefully. The syllabus provides the course policies, class schedule, exam dates, etc. I encourage you to put all the exam dates and homework due dates in your calendar right away.

Time Commitment and Time Management: The general rule is that for every college credit hour there is 2-3 hours of study time outside of class. Thus, for our 3 credit course you should plan on studying 6-9 hours outside of class each week. I suggest setting aside specific study times in your schedule. I strongly urge you to map out your schedule. For example, for a typical week (Sunday-Saturday), mark off when you are in class, clinical, etc. Make sure you factor in sleep, meal time and personal time! When looking at the schedule it may appear that there are large gaps of “free” time in your schedule. Now, put in all your study times. You’lI see that when you factor in study time, college quickly becomes more than a full time job. This may seem overwhelming, but having a consistent schedule will make the work manageable.

Here are links to some helpful time management resources available through ESS (Educational Services for Students)
https://students.case.edu/education/study/onepagers/doc/findingtime.pdf
https://students.case.edu/education/study/onepagers/doc/forma.pdf
https://students.case.edu/education/study/onepagers/doc/formb.pdf

Consider limiting extracurricular activities in the beginning: There are many great extracurricular activities available at CWRU. However, I urge you to limit what you sign-up for until you have transitioned into college life.

Frequency of Study Time: The best advice I can give you is to study often. Long-term memory is created through repetition of information, approaching the same topic in different ways, and getting sufficient sleep. You structurally and chemically change your brain through repetition, and the brain needs time to process the information (sleep). Cramming material into your head before the exam does not provide enough time to alter these neural networks. A student who
studies every day for one half-hour will likely be more successful than a student who studies for five hours on a single day. It is impossible to learn A & P the weekend before a quiz or exam. The goal is for you to learn the material in the week the material is presented to you. This is achievable if you manage your time well (see above). If you learn the material in the week presented, then studying for the exam is review rather than trying to learn the material for the first time right before the assessment.

What to study:
1. I provide Term Lists and Learning Objectives with each lecture. This includes the terms that you need to know (A&P has a language all of its own) and the learning objectives. Use this as a study guide to help direct your studying.

2. Anatomical structures: Use your book figures and Anatomy and Physiology Revealed (APR) to learn the structures required of you. These structures are listed the Term List and Learning Objectives. Most of your quiz and exam anatomy questions will come directly from APR. APR goes into a lot more detail than we do in class. Try not get overwhelmed. Use the Term List and Learning Objectives to narrow down what you are required to know.

How to learn A & P: Do not rely solely on memorization for physiological processes! If you simply memorize your notes when it comes to physiological concepts and processes, I guarantee you will not do well on those types of questions. Understanding a concept takes comprehension. In order to achieve comprehension you must learn the topic, not just memorize the terms associated with it. There are several ways to achieve comprehension:

1. Rewrite your notes after class. The physical writing process helps the brain network memory pathways. I suggest not adding more notes to the ones you took in class, but creating a new document. This is because the notes you tend to take in class are hurried and disorganized. By rewriting your notes you can add material from the book and draw figures. Rewriting notes also helps find gaps in understanding. If something does not make sense while rewriting, I suggest going to your book and trying to work through it. If you can’t figure it out, write your question down, come to office hours or ask me after class, so we can clear up the confusion.

Potential pitfalls when rewriting notes: Do not simply transcribe or copy your lecture notes to new notes. This is a waste of time. Pay attention to what you are writing. If you simply copy information from the lecture or the book, but do not understand what you are writing, then you do not understand. How do you know that you know? Check your progress by asking yourself: “Do I understand what I just wrote?”, “Can I explain this anatomy and physiology in my own words?”, “Do I understand all the biological terms I just wrote in the sentence?” If the answer is no, then you don’t understand. Go back to the notes, the book, etc. to help figure it out. If you can’t figure it out, write your question down and follow through getting the question answered.
2. **Talk out loud:** I suggest talking through concepts. You can do this with a study group or by yourself. If you can explain a concept out loud, without stumbling through it, then you most likely know the concept pretty well. Reading through the steps of a process is not the same. Reading is passive, whereas talking out loud or rewriting a process is more active and allows you to find holes in your understanding. There is ample evidence that students who are more active in their learning, do better than students who are more passive in their learning. Be honest with yourself. If you finish explaining a process and you feel that you do not know it 100%, then most likely you don’t. Again, how do you know that you know? Ask yourself: “Am I confident with everything I just said?” “Did I use a term, but really not understand what it means biologically?” If you are not confident, identify your question and follow through getting it answered.

3. **Draw figures:** For those of you who are visual learners I encourage you to draw pictures or figures of anatomy and physiological processes. Do not simply memorize a figure in a book. If you draw a figure, make sure you can explain what the picture is showing. If you cannot justify every pencil stroke, then you do not understand the concept. Ask yourself: “Do I understand what I just drew? If I had write a detailed figure legend in my own words, could I?”

4. **Get help!** If you are struggling, seek help from me and/or the SI immediately. Do not wait. We are here to help you.

**PRE-CLASS WORK AND IN-CLASS TIME**

The *Term List and Learning Objectives* for each lecture include pre-class work. This is any reading and/or videos that I ask you to review before coming class. Included are questions to make sure that you have assimilated the pre-class work. Lecture pace, material covered and in-class questions will assume this prior knowledge.

**HOMEWORK**

Homework is different than pre-class work. Pre-class work is completed before class. Homework is done after class and is designed to evaluate your understanding of course material and give you practice for quizzes and exams. (Most of the homework questions are from previous quizzes and exams.) Each homework assignment spans 2-4 lectures worth of material. Homework is not graded for right and wrong answers. You earn credit for completing the assignment. Is it possible to earn full credit by scribbling some sentences down and randomly selecting answers? Absolutely. Is it in your best interest to do so? No. Homework is for you to assess how well you are learning material, so I encourage you to take the homework seriously.

**ADDITIONAL RESOURCES**

1. ESS ([https://students.case.edu/education/](https://students.case.edu/education/)) has a wealth of resources to address study strategies, time management, test-taking strategies, text anxiety, etc. Many of these resources
are available on the ESS website, but you can also make an appointment with an ESS staff member to help you.

2. Tutoring: ESS provides up to 5 hours of free one-on-one tutoring sessions each week. To sign up for tutoring visit [http://tutortrac.case.edu/TutorTrac/Default.html](http://tutortrac.case.edu/TutorTrac/Default.html)

3. Supplemental Instruction (SI) Sessions: SI’s hold twice weekly sessions to review course material and build good study skills. For the SI times and locations check: [https://students.case.edu/education/resources/instruction/schedule.html](https://students.case.edu/education/resources/instruction/schedule.html)

4. Office Hours: I hold weekly office hours. Students generally find these very helpful. The most productive office hours are those when students come with specific questions. If there is more than one student, students take turns asking questions and I answer as many as I can during our time together. I am also happy to discuss study strategies. If you cannot attend office hours, you can also request an appointment with me.

5. Course Supplemental Resources: On Blackboard I post class outlines, term lists and learning objectives, figures, homework, keys, pre-class work, etc. These resources are there to help focus your attention on the most relevant material for the course.

6. University Counseling Services [https://students.case.edu/counseling/](https://students.case.edu/counseling/). College can be very stressful. If you are feeling overwhelmed, anxious or just need someone to talk to, counselors are available at UCS. If you are unsure of where to turn, my door is open. We will figure out what resources you need, based on what you are facing. You are not alone and it is okay to reach out for help. Everyone at CWRU is invested in your success and growth as a student and individual.

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