

# Welcome

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An anatomical illustration of a human torso, rendered in a glowing blue, semi-transparent style. The ribcage, spine, and shoulder blades are visible. In the center, a realistic, glowing red heart is shown. Overlaid on the image are several bright blue ECG (heart rate) lines, which appear to be scanning or monitoring the body. The overall aesthetic is futuristic and medical.

## Anatomy & Physiology

# Learning AP is fun!

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- My goal is to teach you how to “learn human anatomy and physiology”. I may need to help some students develop new behaviors for study and learning.
- You are in college, so I will assume that you are an adult and will conduct yourself as responsible adults!
- We have shared responsibilities
  - Be on time
  - Respect your classmates, support staff, and faculty.
  - Respect the lecture and lab resources.
  - You need to ask questions if you don't understand something.
  - You must come to class prepared for the lectures and labs. I will have more to say about this.

# About AP at MC3

- This is an introductory college level anatomy and physiology course.
- This is not a comprehensive AP course. We will not cover all the topics covered in the textbook, however. You **need to read the book**. You need to read the topics to be covered in lecture **before we cover the topics in lecture**. This is part of your preparation for the lecture!
- The course is designed for students interested in a career in allied health care.
- You will have access to my Web site. It is designed to help you pass this class. The Web site has my lecture slides, chapter study guides, Science Department's Learning Objectives, instructional videos, and other learning resources. The site domain name is [www.mc3cb.com](http://www.mc3cb.com)
- The Web site has “extra in-depth content” not required but available for curious students.
- A red star (★) or **red text** on a lecture slide denotes topics that are likely to be on the lecture exam!

# Expectations

- You should have expectations about your professor, that's me! I assume that you want a professor who is knowledgeable, passionate, and dedicated to helping you achieve your career goals. You should also expect your professor to be on time for class and be prepared for the lecture and lab sessions. **This is my promise to you!**
- *I too may have expectations for my students. I assume that you are passionate, curious, and need to learn anatomy and physiology. I also assume that you will follow the **Michigan Educational Association's bench mark for study time** required to learn new lecture material. This benchmark tells us that a student will need to study **“two to three hours”** for each lecture hour. If you factor in lab preparation then a reasonable expectation is **“THREE HOURS PER DAY, SEVEN DAYS A WEEK”**, for the next eight weeks.*
- **This “study time” is also necessary on days when we have class!** If you can't find time to study, then you will fall behind and you will not be able to catch up! If you do not have a solid science background then you may need to spend more study time per day to keep up with the class.
- Success in this class is all about “time on task”! **If you are not willing to put in the time then you should not take this class.** Remember, study time is an investment in your future. Without the study time it is unlikely that you will be able to earn an “A or B” If you study only one hour per day then you will likely fail this class. However, if you do what I ask you to do, then you should be able to earn an “A or B” in my class. (See Daily 24 Hr Worksheet)

# MC3 Open Enrollment Policy

- › MC3's open enrollment policy is good because anybody may take the class. MC3 open enrollment policy is bad because anybody may take the class, even those students not prepared for success.
- › If you do not have basic knowledge about general biology, chemistry, physics, and math then you will find this class extremely difficult. You can still earn an “A” but you will need to learn the prerequisite knowledge you lack while you are learning anatomy and physiology.
- › An open enrollment policy also means that many students are likely to start the class with different knowledge levels. It is like running a race where everyone starts the race at a different position. Some students in our class may already have a four year degree in biology. These students need this class to complete an entrance requirement for another program. Other students may not have had a science class in 20 years.
- › Everyone is welcome to take the class. Anybody willing to study and dedicate themselves to learning this material may earn an “A”.

# Lecture Room Conduct

- › Before you come into the lecture room *please turn off phones and put your phones and laptop computer in your backpack* (read articles about the negative impact of digital devices in the lecture room on the Home Page). Studies on classroom learning actually show it is best to leave digital devices in your car.
- › Beverage is allowed in the lecture room. However, no food and no snacks are allowed in the lecture room.
- › Once the lecture starts, the instructor will have the floor.
- › Students are *not allowed to “cross talk”* during the lecture.
- › Students need to be alert. *If you fall asleep in the class then I will ask you to leave the room.*
- › Students are encouraged to *ask question*. When you have a question, please raise your hand so I can call on you.
- › We will take a 10 minute break during the lecture.

# Lab Conduct

- › Beverage, food, and snacks **are not allowed** in the lab.
- › Please wash your hands before coming into the lab. MC3 will provide gloves for you to wear in lab. Follow all lab regulations (see lab agreement).
- › You may use your phones and computers in lab to access lab resources. (Please leave the lab if you need to talk on your phone.)
- › You need to **prepare for lab at home. Do not use your lab time to prepare for lab.** Before you come to lab, select the lab objectives you want to identify in the next lab session. Then use your text book, lab book, my Web site lab resources, and Google to familiarize yourself with the location of the structures that you want to identify on models and charts during the lab session. Before you come to lab, you should have memorized the names of the structures to be identified in the lab session. **Don't come to lab without being prepared or without a clear goal.**
- › Your lab instructor is a **“facilitator”**. This means the lab instructors are not expected to show students the lab objectives or lecture during the lab session. Lab instructors shall answer students questions and shall help students identify lab objectives. But the students need to ask for help!
- › See lab safety form.

# Collaborative Learning

- › Health care requires a collaborative effort to care for a patient. No one person may take all the credit for curing the patient. So it is important to learn how to collaborate with other people. At MC3, we try to foster this idea in our lecture and lab classes.
- › **You are encourage to form a study group** (groups of three are best) in your lecture and lab sections. Individuals should meet to compare and quiz each other using their Study Guide Questions. This will allow you to compare and edit your answers. If you make your Study Guide Q/A into flash cards then the flash cards are great learning tools to use in your study groups. Turn it into a “game” and you can have “fun” while you learn.
- › Lecture slides with red starts or red text is content that will likely to be on the Lecture Unit Exam. Remember, when you answer the study guide questions you are preparing for the unit exams. You need to **start to learn this information as soon as we cover the topic in class**. Do not wait until just before the the exam and try to “cram” for the exam. You can't do it and you will fail the class.
- › You will also have lab partners. In lab you will work in groups of four students. You will need to quiz each other using the lab charts and models.
- › If you are serious about earning an “A” in this class, then this is how you do it! **Don't work by yourself**. This is a sure way to fail this class. Remember, **the best way to advance your knowledge on any topic is to help someone learn the material!**



# Your Grade Determination

- › You will take four Unit Exams.
- › Each Unit Exams will have a lab anatomy test and a lecture physiology test. The average of the two tests will determine your Unit Exam score. You may earn an additional four bonus points per unit by taking an anatomy quiz before each lab session.
- › There are no “extra credit” assignments to better your grade. However, instructors are permitted to give **four bonus points** for each unit exam. You will have an option to earn these bonus points by completing “Chapter Study Guide Questions”. (see next slide)
- › The lecture unit exams will incorporate a “carve out” for **homework video assignments**. These homework assignments will have a value of 20% of the lecture exam. You will need to watch videos posted on the Web site and answer questions from a worksheet. These videos feature key Science Department's Learning Objectives.
- › Some of the videos are by brilliant scientist from around the world. The contributions made by these men and women are hard to measure. You will be entertained and inspired by watching these videos.
- › The assignments and due dates will be posted on on the “message board”. Consider these “video assignments” as part of your lecture exam, therefore. Do not give your answers to another student. Sharing these answers with other students will be considered as “cheating” and both parties will receive no credit for the assignment.

# About the Chapter Study Guides

- To receive full credit (four bonus points) the Chapter Study Guides must be completed before we cover the chapter in lecture. There will be some exceptions to this rule and these occasions will be posted on the message board.
- The Study Guide Questions are the critical factoids that **you need to know**.
- **Exam questions will come directly from the Study Guide Questions**. If you know the Study Guide Questions then you should earn an “A” on the lecture exam.
- Your Study Guide Questions should be detailed answers and not “one word answers”.
- I suggest that you work with other students to compare your answers and edit your work to make your answers more complete.
- I review your Video Homework Assignments and Study Guide Questions for **completion and not for correctness**. This means it is critical that you compare your answers with other students to confirm “correctness”. If you are still not sure if your answers are correct then bring your questions to class.
- ***Any Study Guide Questions maybe on the exam even if we do not cover the topic in class!***

# What is the best way to learn physiology? By Telling a Narrative!

- › A narrative is a spoken or written account of connected events (i.e. factoids). So, a narrative is simply a story. Every good story needs to have a beginning, middle, and end.
- › So, to learn human physiology, you first need to memorize a few factoids. These are like the pieces to a puzzle or the content to your story. Next, you will need to connect the “factoids” together to create a story about the human body. At first, the story should be simple. But as you learn more factoids, you will add the new factoids to your story. When you tell your story to someone, remember to make sure you include a beginning, middle, and end.
- › *Here is advise from someone that was considered to be the most brilliant scientist ever born in the United States. He said that this is the best way to see if you really understand the subject. **Tell your story to a ten year old child in a way so they understand the story.*** (Dr. Richard Feynman, PhD Theoretical Physics on How to Learn Anything)
- › So learning physiology should not be hard. You just have to practice telling your story.

# Things You Need To Do

- › First, you need to “**unleash your imagination**”. You need to image your body not as a monolithic structure but as a collection of cells. The cells are made up of molecules which are constructed by even smaller structures called atoms. You can't see atoms but you and everything else in the universe are constructed from atoms. This may seem strange but it is true. So, to learn human physiology you need to use your imagination!
- › Every day, you need to make **quiet time** for yourself . This is time when you can think. This is **different than your study time**. Quiet time is a **day dream state of mind**. Einstein said that his quiet time was his most important time. Close your eyes and let your mind drift among all the factoids you know. It is here, in your quiet time, where you will start to understand human physiology.
- › Ask yourself questions about how your body works. How do you move? Why do you eat? How do you remember where you parked your car today or yesterday? What is a smell? What is pain? What is consciousness? There are an endless list of questions you can ask. **You need to be passionately curious!**
- › **Lastly, you need to trust me.** You need to believe that when I ask you to do something, it is only because I want to help you achieve your career goal. You can not learn everything that there is to know about human physiology in eight weeks. But you can start to build a solid foundation that will prepare you for a successful career in health care.
- › **Preparation + Opportunity = Success**

# Preparation Is the Pathway to Success

- › Here is what you need to do throughout the semester to be successful in my class.
- › Before we cover the chapter in lecture you need to do the following. You do this at home or in the library before you come to class. This is what I expect. This is the “preparation”. If you can't do this then you should drop this class now. We (that means you and me) can not succeed unless you prepare for lectures and labs. If you don't prepare, then we will both fail!
  - › First, read the the textbook for that day's lecture.
  - › Preview the online lecture slides to be covered in the day's lecture.
  - › Answer the **Chapter Study Guide Questions before you come to class.** If you can not find an answer or if you want to confirm your answer is right, then first ask one of your classmates to see their answer. If you still are not sure, then ask me in our QA session. This is what active learning is!
  - › As you prepare for lecture, write out questions to ask in class.

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# Preparation Is the Pathway to Success

- › Before coming to lab:
  - › Determine the lab objectives you need to identify for the next lab session
  - › At home, use your textbook, lab book, and Web resources to identify the location of the selected lab objectives.
  - › In lab, identify these selected lab objectives using the lab charts and models.
  - › In your lab group, quiz each other.
  - › At the beginning of every lab session, review all lab objectives identified in previous lab sessions before you start to learn new structures.
- › This course requires daily study time (including those days when we have class). You must prepare for lectures and labs. You will also need to set aside time each day to review all learning objectives covered in the current unit.

# What are opportunities?

- Opportunities are what you prepare for. If you are not prepared for an opportunity then you will not be able to take advantage of the opportunity. Sometimes in life, you may only get one chance at an opportunity. So, opportunities should never be taken for granted.
- What are the opportunities you have in this class?
  - Labs
  - Lectures
  - Lab quizzes and exams
  - Lecture exams

# What are opportunities?

- Proper preparation for a lecture class is critical for the success in my class. If you come to lecture prepared (*You did all that I asked you to do*) then we can spend our time together by me answering your questions in a “question and answer” session. When I answer your question(s), I may go to particular slide(s) to help you better understand the topic. We now can have a “discussion about the material” instead of me simply reading my power-point slides to you.
- This means everybody in the class must come to class prepared. If the overwhelming majority of the students do not come to class prepared then the QA session crumbles. When I ask someone a question, if they are not prepared, then they will sit in their seat and “try to hide”.
- If you fail to prepare for the lecture sessions, then I will need to go back to the old boring routine of reading power-point slides to students. Now, I will be doing the preparation you should of done at home for you in class. So, you have a vote on how the class is going to be structured.



# Carpe diem

Carpe diem is a phrase that comes from the Roman poet Horace (65 BC to 8 BC). Carpe diem means literally "Pluck the day", though it's usually translated as "Seize the Day".

For students, a better translation might be "Do everything you can do today to make tomorrow better".

Remember, the time you spend to prepare for your lectures and labs, and the study-time that you spend to learn the Science Department's Learning Objectives, is an **investment in your future**.

You are the only person who may put a value on your education!

Ask yourself, "Where do I want to be next year, three years from now, or ten years from now". Time is your enemy and it is the most valuable asset you have. You will be rewarded for the sacrifices that you make today by having a brighter future tomorrow.

*Seneca (another Roman orator) said, "It is not that we have a short space of time, but that we waste much of it."*

## Carpe diem!