Anatomy and Physiology I
Learning Guide: Axial Skeletal System

Overview – Mastering the bones of the body is crucial to navigating it. We start this *laboratory sequence* with the axial skeleton and will continue in the next module with the appendicular skeleton. All bones must be identified. Beyond this, you will be able to identify particular parts, fossa, foramen, and other structures with corresponding functions where applicable. This unit is large and must be approached visually. To this end, there is a significant image bank to support your learning endeavors.

Learning Objectives

- Identify the bones of the axial skeleton.
- Identify select structures of each bone and provide their function(s) as appropriate.
- Identify which bones articulate to what corresponding bones.

Getting Started – Because bones and their structural characteristics are many, establishing a daily routine to review the material is critical for mastery of this topic. Do not wait to begin! By daily review, The student can master the volume of material. But your cooperative discipline is essential.

Exam – As this module constitutes a major laboratory thrust, the exam will be a laboratory practical. The entire exam will be visual and fill-in-the-blank. Questions will include naming the bone, the function of a process, and what bone is attached to adjacent bones, to give a few examples. The laboratory practical will include both the axial and appendicular skeleton.

Laboratory Resources – The laboratory is traditionally a "hands-on" endeavor in a teaching laboratory. However, some modern teaching modalities require mastering the content in alternative environments. Nevertheless, the following resources (with links) are available to all:

- Outline – The Outline will organize the material needed to be mastered. If something is on the Outline, you need to know it. You do not need to know if it is not on the Outline.
- Photographic Atlas – the bones housed within the laboratories have been photographed and labeled.
- Videos – I walk you through all the bones in the videos. The discussion will follow the Outline closely.

- **PowerPoint Presentations** – Although PowerPoint presentations are typically used for In-class settings. It is quite valuable for online courses as well. There are two PowerPoints:
  * Axial Skeleton, Pt 1 (Skull)
  * Axial Skeleton, Pt 2 (Vertebrae and Ribs)
- **Bone Boxes in the Library** – Whether your modality is in-class or online, bones and fully articulated skeletons are available in the libraries. They are to be used in the library and cannot be taken home. Bring your College ID to sign them out.

Modalities –

- **On-campus Laboratory** - The bones will be studied in hand in the laboratory. We will proceed bone-by-bone until the entire skeleton has been reviewed. If possible, additional study time is provided for review before the lab practical.
- **Online** - To simulate a laboratory exercise as best as possible, the videos describing the bones will provide a bone-by-bone survey. As you view the videos, it is best to have the bones in hand in the library. If not study in images very carefully.

Lab Practical –

- **On-campus Laboratory** - The lab practical will typically be done in the lab using the bones and special preparations we used in class. You can view a detailed explanation of the practical HERE.
- **Online** - The videos describing the bones will provide a bone-by-bone survey to simulate a laboratory exercise as best as possible. As you view the videos, it is best to have the bones in hand in the library. If not, study the images very carefully.

Lab Practical Date – See the Course Schedule for the practical date.

Final Point – Start immediately! Students who start immediately tend to do well, while students who procrastinate tend not to fare as well. As our collective goal is for you to succeed in your educational and career aspirations, you are urged to start this now. We will discuss other topics along the way, and there may be other exams before you have your lab practical. Regardless, budget a certain amount of time daily to master this material.

Important Note: You are responsible for what is the Outline. However, when you view the image bank, if there are structures labeled that are not on the Outline, you are not responsible for them. You are only responsible for what is on the Outline!