

## CSM Bio 250 Anatomy Skeletal System Lab Guide

HISTOLOGY – ID the following in the slides or on model

compact bone -haversian systems (osteons),  
Haversian (central) canal, concentric lamellae,  
interstitial lamellae, osteocytes, lacunae,  
canaliculi, perforating (Volkmanns) canals  
spongy bone - trabeculae

Know all bones articulated and disarticulated except hands and feet, bones that will only be seen articulated. Also know right from left where appropriate.

### AXIAL SKELETON

#### Skull

Frontal Bone

frontal sinus

Occipital Bone

foramen magnum

occipital condyle and joint

Sphenoid Bone

sella turcica

optic foramen/canal

sphenoidal sinus

Ethmoid Bone

crista galli

cribriform plate

superior and middle conchae

perpendic. plate(nasal septum)

ethmoidal sinus

Temporal Bones

carotid canal

petrous portion

internal auditory meatus

external auditory meatus

jugular foramen

mandibular fossa

(temporomandibular joint)

mastoid process

Parietal Bones

Mandible Bone

body

angle

coronoid process

condyloid process

(mandibular condyle)

alveolar process

Maxilla Bones

alveolar process

maxillary sinus

palatine process

Zygomatic Bones

Nasal Bones

Vomer

Inferior Nasal Conchae

Lacrimal Bones

Palatine Bones

Cranial Structures

Sutures:

-coronal suture

-sagittal suture

-lambdoidal suture

-squamosal suture

Sinuses

zygomatic arch

orbit

supraorbital margin

superior orbital fissure

inferior orbital fissure

optic canal

anterior cranial fossa

middle cranial fossa

posterior cranial fossa

Skull of Newborn

-Anterior/Frontal Fontanel and others

Hyoid Bone

## Ear Ossicles

Malleus  
Incus  
Stapes

head with facets or demifacets  
neck  
tubercle with articular facet  
angle  
costal groove

## Vertebral Column

### Typical Vertebra

Body(with intervertebral disc)  
spinous process  
transverse process  
vertebral foramen  
superior articular process and facet  
inferior articular process and facet

### Cervical Vertebrae

transverse foramen(cervical only)

### Atlas - lacks a body

-anterior arch with fovea dentis  
-lateral mass with superior and inferior  
articular processes

### Axis

-dens/odontoid process

### Thoracic Vertebrae

costal facets

### Lumbar Vertebrae

### Sacrum

-superior articular process and  
facet  
-median crest  
-lateral mass with auricular surface for  
articulation with ilium  
-pelvic surface with foramina  
-dorsal surface with foramina  
-sacral canal

### 7. Coccyx

Curves of the Spine, scoliosis, kyphosis,  
lordosis

## Ribs

### Typical

### Atypical

#### 1. First and second rib

-head with one articular facet  
-prominent and thick tubercle  
-no angle  
-no costal groove

#### 2. Eleventh and Twelfth/Floating Ribs

- head with one articular facet  
-no neck or tubercle  
-costal groove shallow or  
nonexistent

### Intercostal space

### Sternum

costal cartilage  
manubrium  
sternal angle  
body of sternum  
xiphoid process

## APPENDICULAR SKELETON

### Pelvic Girdle

symphysis pubis  
greater/false pelvis  
lesser/true pelvis

### Os Coxa (ossa coxae pl.)

acetabulum  
ilium  
iliac crest  
auricular surface  
ischium  
ischial tuberosity  
ischial spine

pubis

### Sacroiliac joint

Sex Differences in Pelvis – pubic arch

Clavicle	radial tuberosity styloid process ulnar notch
acromial end	
sternal end	
sternoclavicular joint	
acromioclavicular joint	
Scapula	Carpals: intercarpal joints Navicular/Scaphoid Lunate Triquetral Pisiform Trapezium Trapezoid Capitate Hamate
spine	
supraspinous fossa	
infraspinous fossa	
glenoid cavity/fossa	
shoulder joint	
coracoid process	
subscapular fossa	
(supra)scapular notch	
acromial process/acromion	Metacarpals, first metacarpal-carpal joint
Humerus	Phalanges - distal, middle, proximal
head	
shaft	Femur
anatomical neck	Head and hip joint
surgical neck	fovea capitis
greater tubercle	neck
lesser tubercle	shaft
deltoid tuberosity	greater trochanter
nutrient foramen	lesser trochanter
capitulum	medial condyle
trochlea	lateral condyle
medial epicondyle	intercondylar fossa
lateral epicondyle	patellar surface
coronoid fossa	medial epicondyle
olecranon fossa	lateral epicondyles
Ulna	Patella and joint
semilunar/trochlear notch	
coronoid process	Tibia
olecranon process	Knee joint
radial notch and radioulnar joint	medial condyle
interosseous crest/border	lateral condyle
head	intercondylar eminence
styloid process	tibial tuberosity
Radius	anterior crest
Shaft/diaphysis	medial malleolus
Head and radioulnar joint	fibular notch
Radiohumoral joint	

Fibula

head

lateral malleolus

### Ankle and Foot

Tarsals:

Talus

Calcaneus

tuberosity of calcaneus

Navicular

First/medial Cuneiform

Second/intermediate Cuneiform

Third/lateral Cuneiform

Cuboid

Metatarsals

Phalanges

Arches of Feet

longitudinal – medial and lateral

transverse