

HUMAN ANATOMY LAB I: ANAT 314 LABORATORY OUTLINE

Week 1	Introduction, Lab Orientation, Study and Preparation Tips	
Week 2	Bones of the Shoulder Girdle & Upper Extremity	Lab #1
Week 3	a) Muscles of the Shoulder & Arm b) Brachial Plexus and Upper Ext. Peripheral Nerves	Lab #2
Week 4	a) Muscles of the Forearm & Hand b) Circulation of the Upper Extremity	Lab #3
Week 5	a) Bones of the Pelvis & Lower Extremity **Upper Extremity Lab Exam**	Lab #4
Week 6	a) Muscles of the Hip and Thigh b) Lumbar/Sacral Plexus and Lower Ext. Peripheral Nerves	Lab #5
Week 7	a) Muscles of the Leg and Foot b) Circulation of the Lower Extremity	Lab #6
Week 8	a) Bones of the Vertebral Column & Thorax **Lower Extremity Lab Exam**	Lab #7
Week 9*	a) Muscles of the Neck & Trunk b) Circulation of the Neck & Trunk *Thanksgiving Week (Thursday Labs must go to earlier lab)	Lab #8
Week 10	a) Review labs 1-8	
Week 11	**Cumulative Lab Final (Labs 1-8) **	

* Those students who have lab on Thursday of Thanksgiving week must attend one of the labs held Monday, Tuesday, or Wednesday.

Laboratory Orientation

Student's Name: _____

GTF's Name: _____ Lab Time: _____

GTF's Office Hours: _____

GTF's email: _____

A. Anatomy Lab Team:

- a. **Dr. Susan Verscheure:** Human Anatomy instructor and supervisor of the anatomy lab and GTFs. Feel free to discuss any lab questions or concerns with me.
- b. **GTFs:** Masters and Doctoral students in the Department of Human Physiology. These graduate students work very hard to create the ideal learning environment for you...please treat them with the respect they deserve.
- c. **Open Lab TAs:** Undergraduate students who have completed the anatomy sequence and are receiving credit to review the lab material each week and serve as a teaching resource for you during open labs.
- d. **Dissectors:** Undergraduate students who have completed the anatomy sequence and are receiving credit to prepare the cadaver specimens for teaching purposes. Some of these students may also be Open Lab TAs.

B. Lab Format:

1. **Two Hour Compulsory Teaching Lab:**

- a. **Attendance** will be taken each week by your GTF. **2.5 of the allotted 5 points will be deducted for each lab missed, with the exception of your first absence.** If you are more than a ½ hour late for class, you will be marked as absent. If you are ill, or must miss a lab for extenuation circumstances, please contact both your regular GTF and the GTF for the lab you wish to attend. Students attending a lab for which they are not registered will be asked to leave. All GTF email addresses can be found on the joint-lab blackboard site.

b. **Preparation** is REQUIRED for each lab that you attend. Lab preparation will typically include identification of the lab structures on the pictures found in the lab manual. References such as your lab and lecture text books, as well as the software available in the Science Library ITC will be paramount when completing your preparation each week. GTFs will randomly check for completion of your preparation, and **2.5 of the allotted 5 points will be deducted each time your preparation has not been completed**. Students should be familiar with EVERY structure that will be identified during that particular lab session, prior to their lab time.

c. **Personal items** should be left in the open cupboard next to the door during both teaching labs and open labs.

2. **Open labs:** (Times posted on Lab door by Week 2)

a. Open to all current anatomy students for study purposes, and are supervised by Open Lab TAs or Dissectors. Only Open Lab TAs are available to answer your questions (not dissectors).

b. Open labs are typically very crowded the week of an exam and, therefore, it is NOT a good idea to wait until the last minute to study for your exam. The most successful students typically visit **one Open Lab per week** to ensure they are able to remember all the necessary information.

c. **Nothing** is to be removed from the lab.

d. We **do not** suggest you bring food into this chemical environment.

3. **Grading and Exam Schedule:**

a. There are two non-cumulative midterm exams and one cumulative, comprehensive final exam.

b. The midterm exams are held on Fridays (weeks 5 and 8) and are each worth **25%** of the final grade.

c. The final exam is held Friday of finals week and is worth **40%** of the final grade.

d. **Ten percent** of your final grade is composed of a grade for attendance (**5%**) and a grade for lab preparation (**5%**).

B. Lab Conduct:

1. **Care of Models, Bones and Charts:**

- a. Any student found damaging bones, charts or models, or otherwise misusing lab equipment will be banned from the lab. Please do not use pens or pencils when pointing to structures on the models, bones or charts.

2. **Care of Cadaver Specimens:**

- a. Specimens must be kept moist by spraying with the solution available in the spray bottles at regular intervals during all lab sessions.
- b. Dissection is to be carried out by the GTF's and authorized dissection students only.
- c. Gloves must be worn at all times when handling the cadavers. (May be purchased at Chem Stores on campus)

3. **Treatment of Cadaver Specimens:**

- a. **The cadavers are to be utilized for educational purposes only and must be treated with the utmost respect at all times. It is a Class C felony to mistreat human remains in any way. Violators are subject to academic discipline and/or criminal prosecution.**

C. Lab References:

1. **ONE** of the following texts is **Required** (available at the bookstore):
McMinn's Color Atlas of Human Anatomy,
Netter's Atlas of Human Anatomy.
2. The **Science Library** reference section has an excellent collection of anatomical atlases and reference texts.
3. **Anatomical computer software** is available to you both in the lab (coming soon!), and in the Science Library ITC for your use as an interactive resource (A.D.A.M plus Visual Human Dissector).

ANAT 314 ANATOMY LAB EXAM PROCEDURES

- A maximum of 20 students will participate in the lab exam at one time.
- Students will sign up for their preferred exam time slot (45-60 minute exam) on sign-up sheets outside of the lab the week prior.
- Exams will be held between 8:00am-3:00pm on the dates indicated in the syllabus.
- All of the structures on models, charts and cadavers that are included in lab stations throughout the term may be tagged during the exams.
- Pins and arrows will identify the anatomical structures to be identified, and students will rotate from station to station during the exam while recording the names of the tagged structures.
- In order to correctly identify an anatomical structure, it is sometimes necessary to include information beyond the NAME of the structure. Commonly, the orientation is required (Right or Left), or the name of the bone that a tuberosity or fissure is found on might also need to be identified. To ensure that students include the necessary information to obtain all points, small index cards will be situated next to the tagged structure with prompts (eg: R/L, or _____ of the _____).
- The following is a good rule of thumb: each structure needs to be identified so that a medical professional would know PRECISELY which anatomy structure you were referring to.

Abbreviations and Tissue Naming:

It is NOT necessary to include the words "Muscle" or "Bone" when identifying these tissues on an exam, but it IS necessary to include the names of all other tissues (eg: ligaments, nerves, veins etc.).

When identifying structures during exams, the following abbreviations may be used.

- | | |
|---------------------------|------------------------------|
| - Lig for ligament | i.e. Lateral collateral lig. |
| - V for Vein | i.e. External jugular V. |
| - A for artery | i.e. Brachial A. |
| - N for nerve | i.e. Vagus N. |
| - L for left | i.e. L humerus. |
| - R for right | i.e. R ulna. |

Outline of Scoring Procedures:

A. **Bones:** Each question is worth 2 points.

- 1) Name of bone worth 1 point.
- 2) Name of specific structure worth 1 point.
- 3) Incorrect orientation of BONES- 1/2 point off.
- 4) Spelling errors - 1/2 point off.

eg. Lateral epicondyle of R humerus	2 points
Lateral epicondyle of L humerus	1 1/2 points
R humerus	1 point
Humerus	1/2 point
R lateral epicondyle	1 point
Lateral epicondyle	1/2 point

B. **Muscles and Ligaments:**

- 1) Name of specific structure is worth 2 points.
- 2) Spelling errors - 1/2 point off.

C. **Organs**

1. Identifying specific structure is worth 2 points.
2. Spelling errors - 1/2 point off.

i.e. "**Cortex**" alone is not specific enough and would earn no points.
"**Renal cortex**" of the kidney would earn full points.

i.e. "**Bladder**" would not earn any points.
"**Gall bladder**" or "**urinary bladder**" would be correct and earn full points.

D. **Nerves, Arteries, and Veins:**

1. Identifying specific structure is worth 2 point.
2. **Incorrectly** naming the type of tissue (vein, artery, nerve) is a 1 point deduction.
3. Exception for Brachial Plexus is as follows:

"N." notation is not required in the following instances:

- **Rami:** Distinguish by number (i.e. rami C5 of the brachial plexus).
- **Trunks:** Distinguish by relationship (i.e. middle trunk of the brachial plexus).
- **Divisions:** Distinguish by "trunk" they come off of (i.e. anterior division of the lower trunk of the brachial plexus).
- **Cords:** Distinguish by relationship (i.e. posterior cord of the brachial plexus).

ANATOMICAL TERMINOLOGY:

Reference Position:

- Anatomical position

Directional Terminology:

- Superior or Cephalic

- Inferior or Caudal

- Anterior or Ventral

- Posterior or Dorsal

- Medial

- Lateral

- Proximal

- Distal

- External

- Internal

- Superficial

- Deep

- Peripheral

- Central

- Median

- Intermediate

- Parietal

- Visceral

- Plantar

- Palmar or Volar

Movement Terminology:

- Flexion

- Extension

- Adduction

- Abduction

- Medial Rotation

- Lateral Rotation

- Circumduction

- Retraction

- Protraction

- Elevation

- Depression

- Supination

- Pronation

- Dorsi Flexion

- Plantar Flexion

- Inversion

- Eversion

- Radial and Ulnar deviation

Planes:

- Sagittal Plane

- Frontal Plane

- Transverse Plane

Regional Terminology:

- Cervical

- Crural

- Cubital

- Brachial

- Axillary

- Digiti minimi

- Thoracic

- Sural

- Pollicis

- Hallucis

Axes:

Frontal Axis

Sagittal Axis

Vertical Axis

BONY FEATURES:

Articulating Surfaces:

Condyle (large articulating knob)

Head (a round articulating end)

Facet (a flat or shallow articular surface)

Non-Articulating Surfaces:

Process (any bony prominence)

Tubercle (a small rounded process)

Tuberosity (a large rough process)

Trochanter (a massive process found only on the femur)

Spine (a sharp long process)

Crest (ridge-like projection)

Epicondyle (a projection above a condyle)

Depressions and Openings:

Fossa (a shallow depression) Pl. fossae

Sulcus (a groove accommodating a vessel, nerve, or tendon) Pl. sulci

Fissure (a narrow slit-like opening)

Meatus or **Canal** (a tube-like passageway through bone) Pl. meati

Alveolus (a deep pit or socket) Pl. alveoli

Foramen (a rounded opening through bone) Pl. Foramina

Sinus (a cavity or hollow space within a bone)

Fovea (a small pit or depression) Pl. foveae

Other common terms:

Origin

Fascia

Retinaculum

Insertion

Aponeurosis

Innervation

Septum

CHART AND MODEL KEY

Charts:

A – Posterior Skeleton
B – Anterior Skeleton
C – Posterior Muscle/Nerve Man
D – Anterior Internal/External Man
E – Posterior Muscle Man
F – Anterior Muscle Man
G – Anterior/Posterior Skeleton
HVS – Human Vascular System
LL – Lower Limb
OCA – Organs of Chest & Abdomen
RS – Respiratory System.
UL – Upper Limb

Models:

AJM – Ankle Joint Model
HJM – Hip Joint Model
HM – Hand Model
KJM – Knee Joint Model
L/S M – Lumbar/Sacral Model
SJM – Shoulder Joint Model
TT – Tommy Torso

Plates:

FBCP – Full Body Circulation Plate
CVP – Cervical Vertebra Plate
FBNP – Full Body Nerve Plate