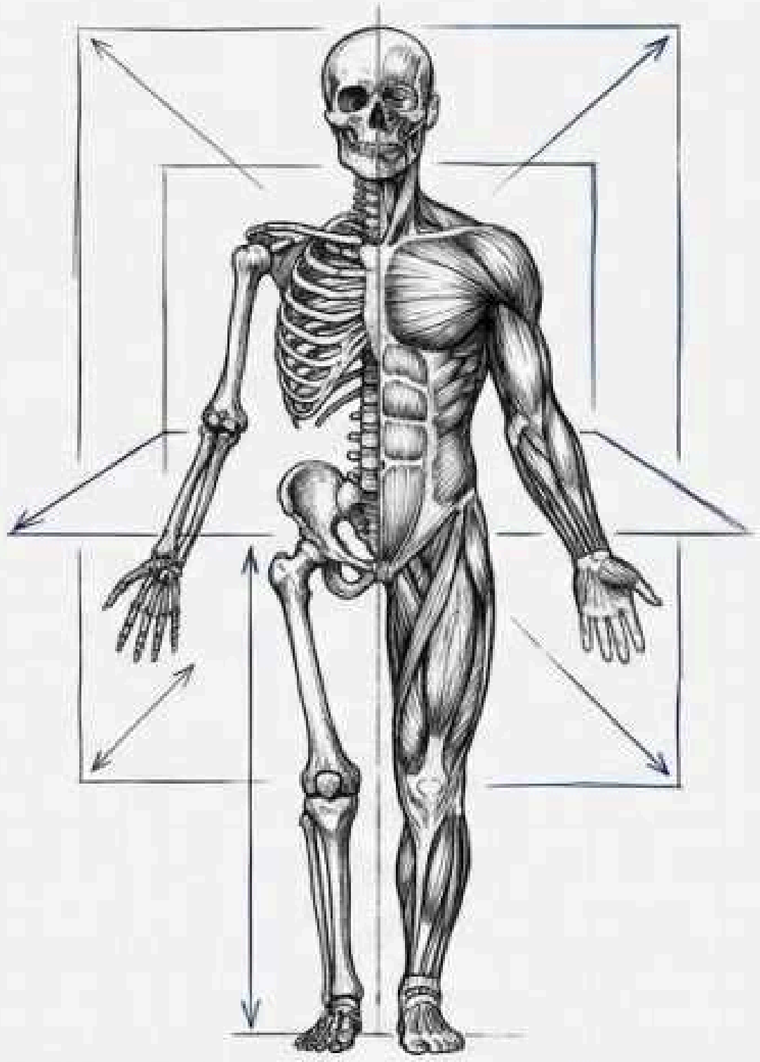
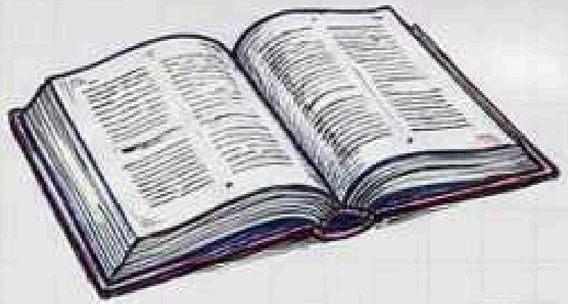
Biology 130 B: Brief Human Anatomy

Lecture 0 - Course Overview



¶ 0.1

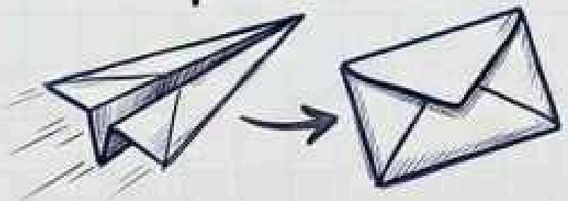
Learn the Material



Be of Service to Humanity



Report Back



Email: garyanderson@mail.grokbot.com
OR Post on X: @garyanderson

Learn → Serve → Report = Full Compensation

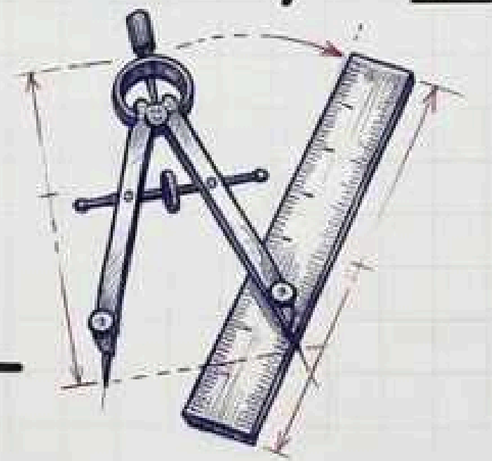
¶0.2

Anderson Academy (4-Year Library)

Bio 130 + B = Human Anatomy

B = Brief (An overview + 6 short lectures ≈ 1 hour total)

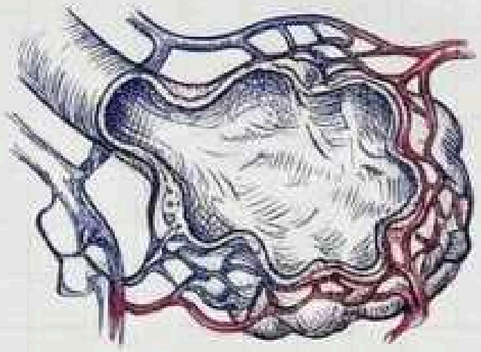
$$\text{Anatomy} = \sum \begin{cases} \text{Parts} \\ \text{(Structure)} \\ \text{Location} \\ \text{(Where they are)} \\ \text{Build} \\ \text{(How they are constructed)} \end{cases}$$

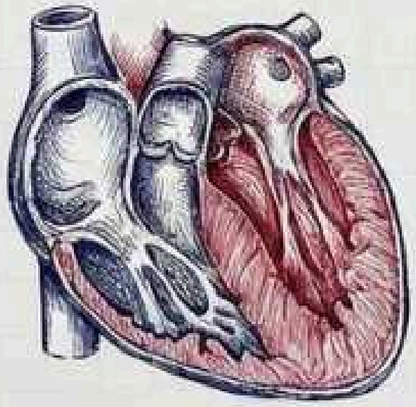


Anatomy ↔ Physiology (The Inseparable Pair)

¶0.3

Bio 130 B (Anatomy)
Form and Structure





Bio 110 B (Physiology)
Function and Work

Thin walls → Allow gases to pass easily.

Thick walls → Generate mechanical force to pump blood body-wide.

Form Follows Function: The shape of every part suits its job.

¶0.4

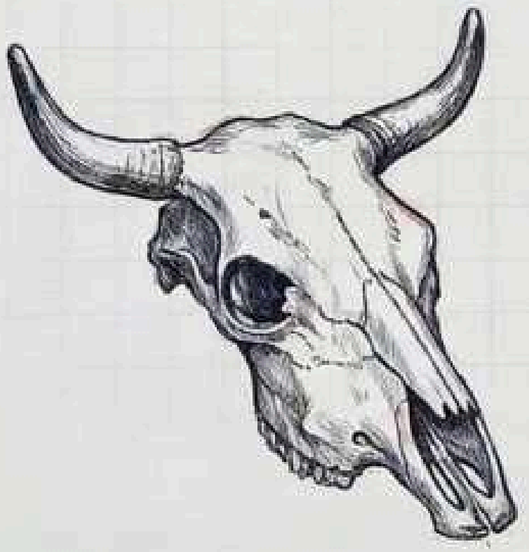
Errors went unchallenged for >1000 years

2nd Century

1543

Galen (Greek Physician)

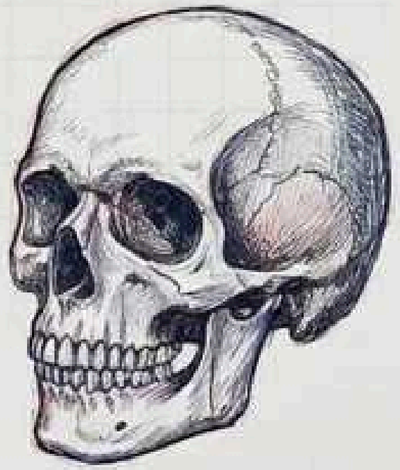
Dissected animals to describe human anatomy.



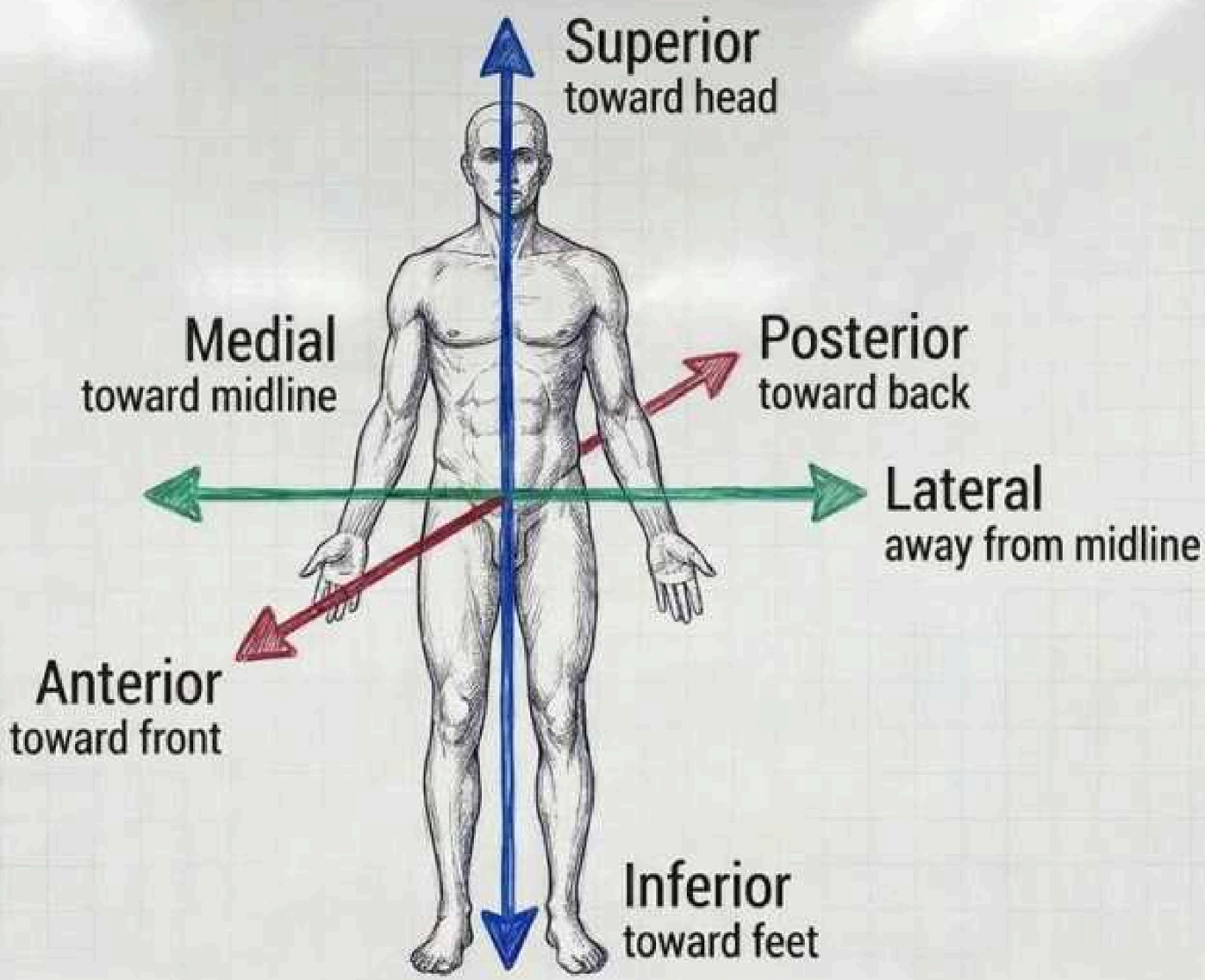
Andreas Vesalius

Careful human dissection (founded modern anatomy).

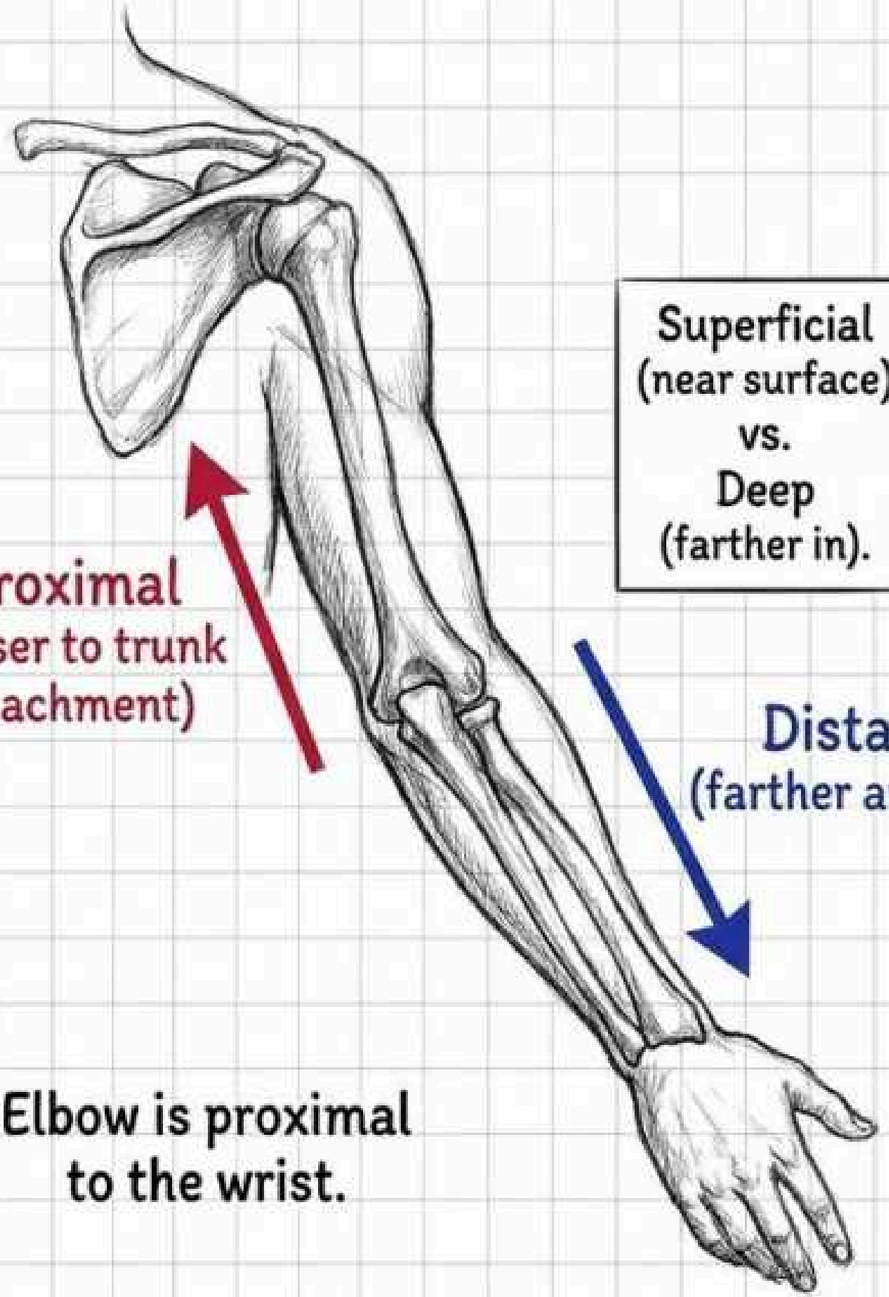
On the Fabric of the Human Body



¶0.5



Anatomical Position: The universal reference point.

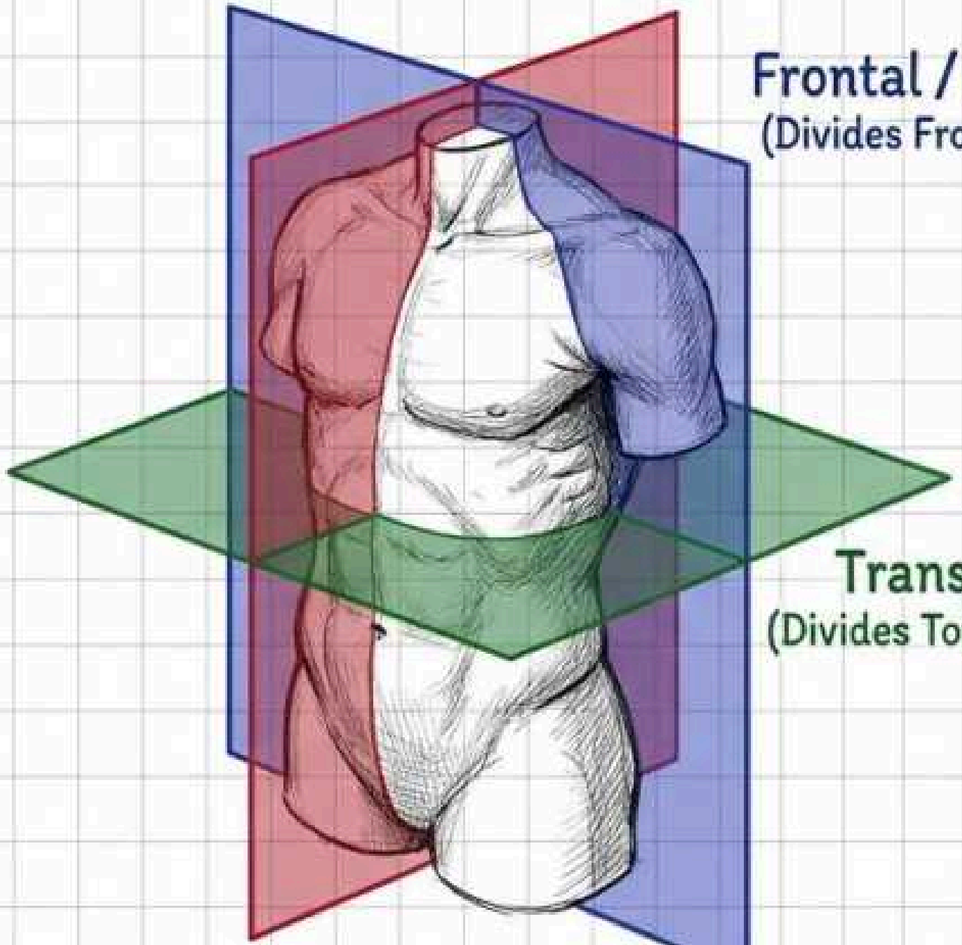


Proximal
(closer to trunk attachment)

Distal
(farther away)

Superficial
(near surface)
vs.
Deep
(farther in).

Elbow is proximal to the wrist.



Sagittal
(Divides Left / Right)

Frontal / Coronal
(Divides Front / Back)

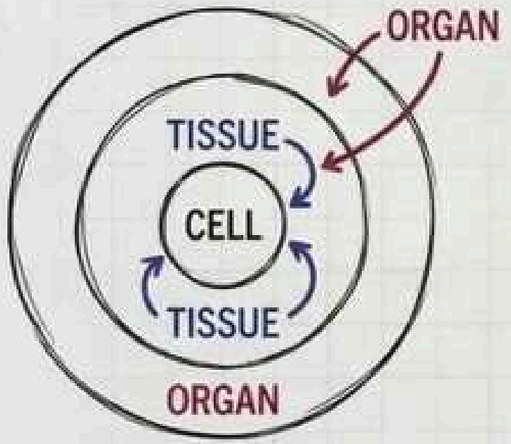
Transverse
(Divides Top / Bottom)

Sagittal
(Divides Left / Right)

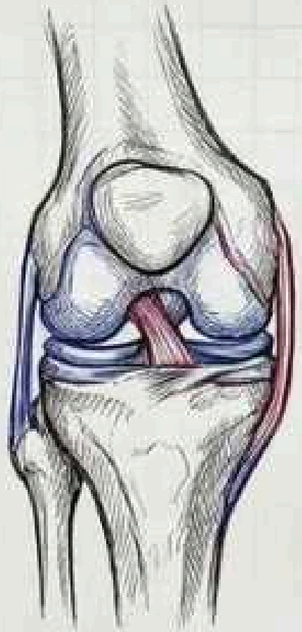
Course Map (Part I)

¶ 0.7

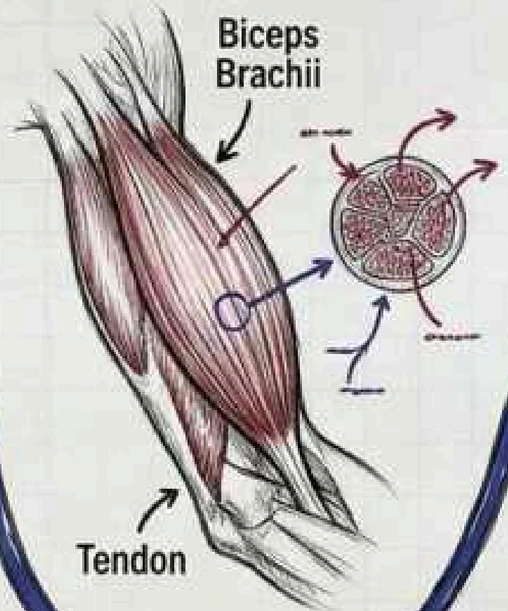
Lecture 1 - Levels of Organisation



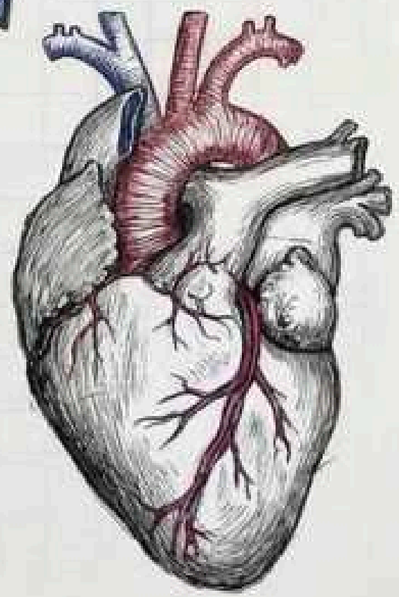
Lecture 2 - Skeleton & Joints



Lecture 3 - Muscles



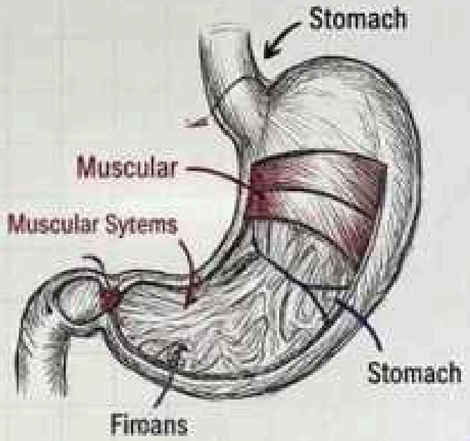
Lecture 4 - Heart, Blood Vessels, Lungs

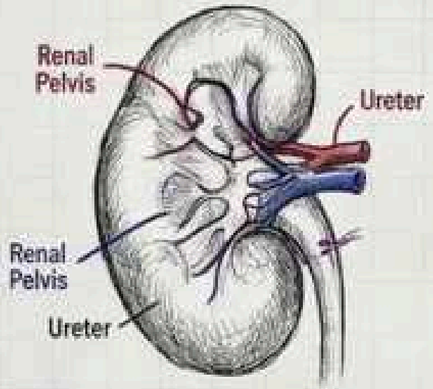


Course Map (Part II)

¶ 0.8

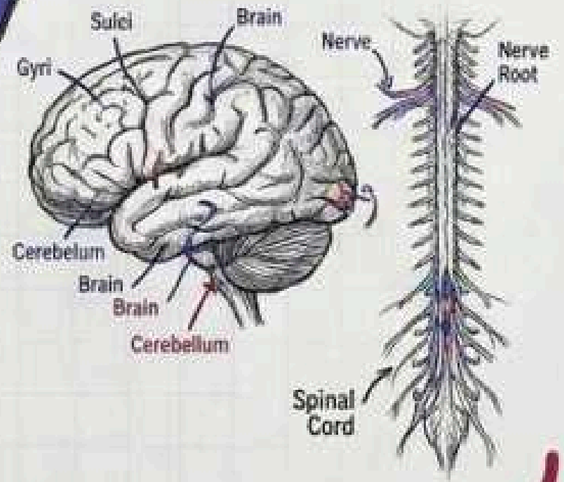
Lecture 5 - Digestive, Urinary, Reproductive Systems





Lecture 6 - Nervous System, Sensis, Endocrine + Summary

Lecture 6 - Nervous System, Senses, Endocrine System + Summary

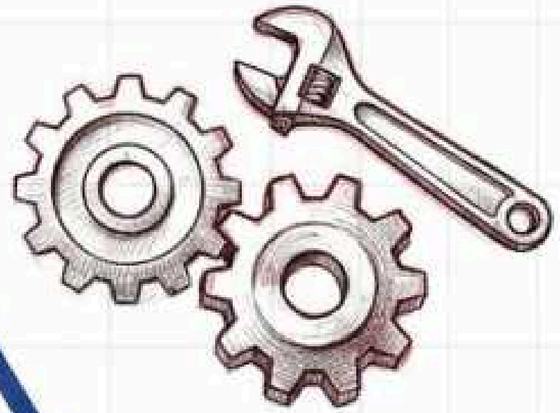


Throughout: Where structures are + How form suits function.

¶ 0.9

The Three Big Ideas

Structure Follows Function



Connection

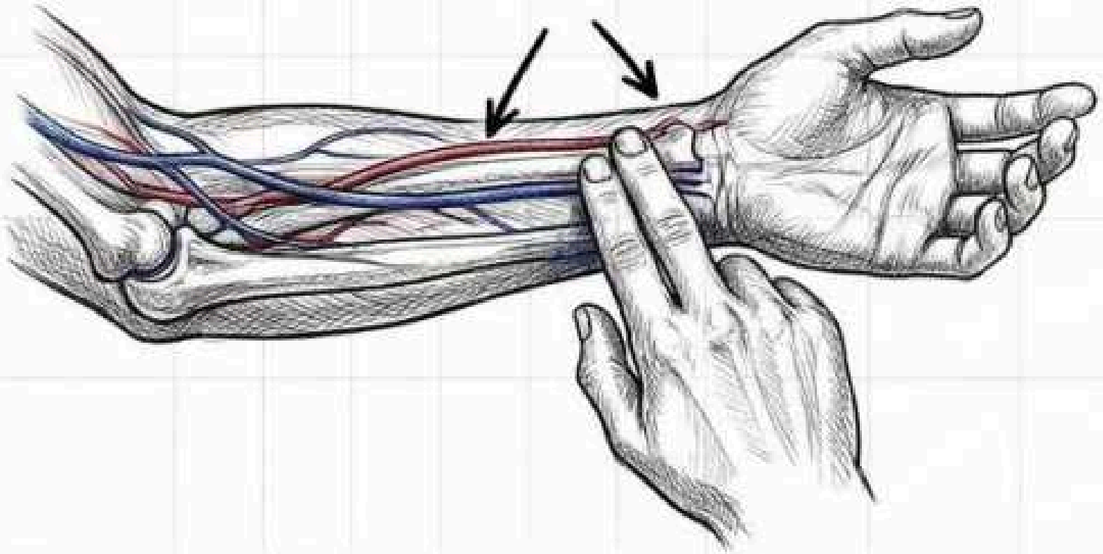
No system works alone. The body is an integrated whole.

Levels of Organisation

Atoms → Molecules → Cells → Tissues → Organs → Systems → Organism

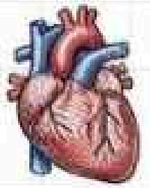
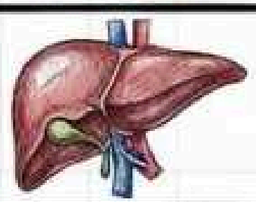
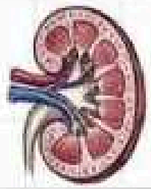
Use Your Own Body

Feel (bones)
Find (pulse)
Flex (muscles)
Point (to organs)
Draw (simple sketches)



Latin & Greek Roots

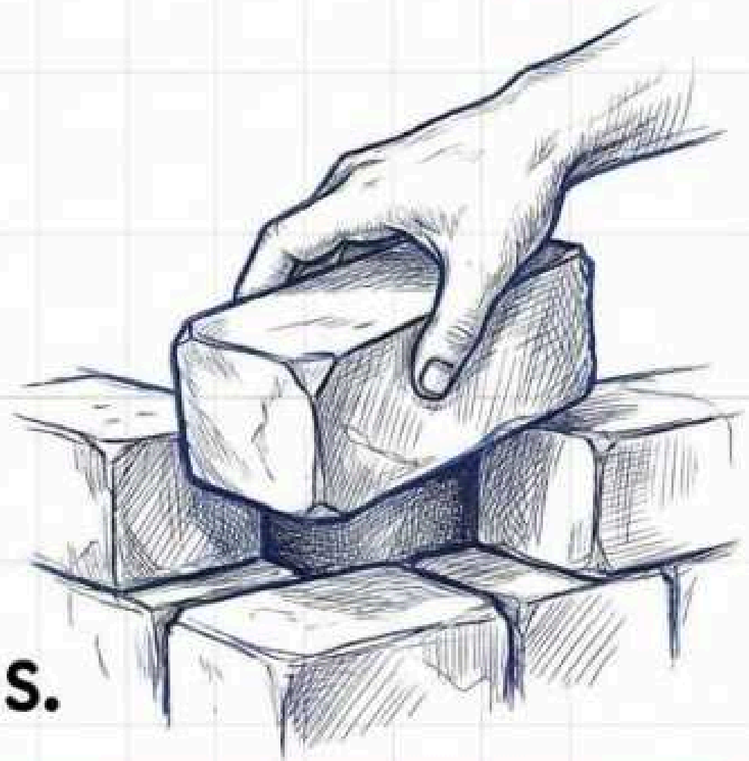
¶ 0.10

Cardio →	Heart 
Gastro →	Stomach 
Hepato →	Liver 
Nephro →	Kidney 
Osteo →	Bone 

Final Learning Outcomes

¶ 0.11

- ☐ Use anatomical terms accurately.
- ☐ Describe tissues & name major bones/muscles.
- ☐ Describe the heart, vessels, and lungs.
- ☐ Trace the path of food and urine.
- ☐ Outline reproductive organs.
- ☐ Describe nervous and endocrine systems.



This course is for education, not medical advice.

Let us begin with the building blocks.