**Bio 322 – Human Anatomy**

**Objective list for Nervous System**

1. **Exercise #15** 
   1. **Read and understand written material.**
   2. **Understand different divisions/subdivisions of nervous system**
   3. **Examine nervous tissue on microscope (slide #17 and Figure 15.3)**
      1. **Identify neuron (soma, axon, dendrite) and be able to differentiate between what is a neuron and what is a glial cell. Don’t need to try to identify specific glial cells.**
   4. **Recognize different neuron shapes (Figure 15.5)**
2. **Exercise #17**
   1. **Read and understand written material relating to: meninges, ventricles of the brain**
      1. **Know and understand Figure 17.3 of lab book and 15.3 of textbook**
   2. **When studying the brain anatomy we will focus on the structural anatomy of the brain as opposed to the functional anatomy of the brain.**
      1. **Refer to Figures 17.6, 17.8, 17.7, 17.10. 17.12**

**EXTERNAL ANATOMY OF THE BRAIN**

FIGURES : 17.6, 17.7, 17.8, 17.10 and models

(Textbook illustrations 15.1, 15.2, 15.9, 15.12)

Cerebellum

Pons

Midbrain

Medulla Oblongata

Cerebrum: Gyrus

Sulcus

Lateral sulcus or fissure

Central sulcus

Frontal lobe

Parietal lobe

Occipital lobe

Temporal lobe

Olfactory tract

Precentral gyrus

Postcentral gyrus

Longitudinal fissure

Right and left hemispheres

Parieto-occipital sulcus

**INTERNAL ANATOMY OF THE BRAIN**

FIGURES : 17.10 and brain models

(Textbook figure 15.2)

Cerebrum

Cerebellum

Corpus callosum

Thalamus

Hypothalamus

Midbrain

Pons

Medulla oblongata

Pituitary gland

Third ventricle (ventricle models)

Mesencephalic (Cerebral) aqueduct

Fourth ventricle

Arbor vitae (cerebellum)

**VENTRICLES AND CIRCULATION OF CEREBROSPINAL FLUID:**

FIGURES : 17.3, brain and ventricle models. ALSO, be sure to look at Figure 15.4, 15.5 from your textbook which illustrates the flow of CSF and the location of choroid plexuses.

Lateral ventricles *(visible on ventricle models, but not on brain models)*

Third ventricle

Fourth ventricle

Cerebral aqueduct

Interventricular foramen (not really seen on models)

Choroid plexus within each ventricle *(Visible for 3rd and 4th ventricle on ventricle models)*

Subarachnoid space

Arachnoid villi (singular = villus) (Figure 15.4, 15.5 from textbook)

**Meninges**

FIGURE 15.3 of TEXTBOOK

Dura mater (meningeal, periosteal layers)

Arachnoid mater

Pia mater

Subdural space

Subarachnoid space

Falx cerebri

Falx cerebelli

Tentorium cerebelli