Focus of Study for Week 1 Material

- Meninges and Ventricles – who are they, where are they, know hemorrhages into meningeal spaces and their causes, types of hydrocephalus and causes

- Nerve cells – Basic structural features and their functions, myelination, role of microtubules, PNS regeneration, BBB

- Reactions to Injury – edema and atrophy-what they look like and their causes, herniation, learn cellular changes as we cover them in disorders

- Action Potential – ionic changes that cause it, myelin/conduction, ionic environment

- Neurotransmitters – steps in synaptic transmission; synthesis, characteristics of receptors, degradation, reuptake mechanisms, and roles for glutamate, GABA, monoamines, neuropeptides.

- Synaptic Integration – basic ways synapses integrate postsynaptic potentials, mechanisms for short-term and long-term changes in synaptic strength, how NMDA receptors work.

- Development – early embryonic compartments and their fate, changes during postnatal development

- Developmental Malformations – Microcephaly, Hydrocephalus, Neural tube defects, Midline cerebral defects, Cell migration disorders, Cerebellar anomalies, Spinal cord lesions

- Sphingolipidoses – Pathological features and cellular structures damaged (cell body vs axon/myelin) for Tay-Sachs, Gaucher, Niemann-Pick, Krabbe, MLD; Biochemistry: chart in First Aid pg 88 (2019 edition).

- Neuroimaging – know objectives in worksheet