Central Nervous System and Special Senses

08CNS001 Discuss the normal function of the CNS ventricular system and how it relates to intracranial pressure. Be able to describe etiology, pathophysiology, presentation, and treatment of increased intracranial pressure.

08CNS002 Describe the types of brain herniation, structures affected, and signs/symptoms on presentation.

08CNS003 Describe the pathophysiology and clinical presentations associated with head trauma including types of hemorrhage, concussion, diffuse axonal injury, contusions, penetrating trauma, and spinal cord injury.

08CNS004 Describe the etiology, pathophysiology, clinical presentation, diagnosis, management, and prognosis of the different types of vascular malformations and aneurysms in the CNS.

08CNS005 Describe the cerebrovascular anatomy and neuroanatomy of the CNS and how it helps in determining stroke location and etiology.

08CNS006 Discuss the etiologies, risk factors, pathophysiology, presentations, workup, and management for TIAs, hemorrhagic, and ischemic strokes.

08CNS007 Describe the different neuroanatomical structures and the pathogenesis that may be involved in generating the signs/symptoms of visual disturbances, dizziness, confusion, delirium, and coma.

08CNS008 Explain the physiology of and pathologies related to sleep including determinants, stages, differences from coma, and disorders. Compare and contrast REM and non-REM sleep including neurophysiologic mechanisms and physiologic changes that occur.

08CNS009 Describe the pathophysiology, differentiating signs and symptoms, and treatment of the various types of headaches.

08CNS010 Define the different types of seizures and be able to identify the appropriate diagnostic tests used to distinguish one type from another.

08CNS011 Describe the treatment of epilepsy (including status epilepticus) and seizures including the first-line therapies, mechanism of action, pharmacokinetics, and adverse effect profiles of the individual anti-epileptic drugs.
08CNS012 Describe the reaction to injury and the histological/pathological findings for nervous tissue including neurons, astrocytes, oligodendrocytes, ependymal cells, and microglial cells.

08CNS013 Explain the clinical and pathologic techniques used in differentiation of nervous system disorders including: demyelinating diseases, disorders of myelin production, vitamin deficiencies, and degenerative diseases.

08CNS014 Define the cognitive domains.

08CNS015 Describe dementia, including the etiology, diagnosis, and treatment of the following: Alzheimer’s disease, Lewy body disease, vascular dementia, and frontal temporal dementia.

08CNS016 Describe the most common types of neoplasias of the central nervous system and the associated pathologic findings with each.

08CNS017 Describe the types of viruses associated with infections of the nervous system, their transmission, pathogenesis, clinical manifestations and treatment.

08CNS018 Discuss the causes and management of acute and chronic pain.

08CNS019 Describe peripheral neuropathies and specific disorders that may cause myelin breakdown, destruction of the axons, and destruction of cell bodies in the PNS.

08CNS020 Differentiate between upper and lower motor neuron deficits and describe presentations of common polyneuropathies, mononeuropathies, and radiculopathies.

08CNS021 Describe etiology, pathophysiology, presentations, and management for pathologic conditions of the neuromuscular junction, and muscular dystrophies.

08CNS022 Describe etiology, pathophysiology, presentations and management of movement disorders.

08CNS023 Describe common manifestations of infection in the CNS (including bacterial and viral meningitis, HSV, Streptococcus pneumonia, Neisseria, Lyme disease, Haemophilus, Listeria, Prions, and Rabies) and conditions that can mimic infection (e.g., sarcoidosis)

08CNS024 Describe hereditary disorders of the nervous system including neurofibromatosis, tuberous sclerosis, von Hippel-Lindau, and Sturge-Weber.

**Endocrine System**

08END001 Compare and contrast the pathophysiology of type I and type II diabetes mellitus.

08END002 Differentiate the diagnostic criteria of diabetes mellitus, impaired fasting glucose, and impaired glucose tolerance.
08END003 Discuss diabetes treatment options including indications, mechanisms of action, adverse reactions, drug interactions, effects on Hgb A1c, and ADA recommendations concerning their use.

08END004 Describe normal thyroid physiology including hormone synthesis and regulation through the hypothalamic-pituitary-thyroid gland-target tissue axis and how this leads to hyper/hypothyroid pathologies.

08END005 Describe the pathophysiology, histopathology, clinical presentation and management of thyroid disorders, including thyroiditis, thyroid neoplasms, goiters, hyperthyroidism, and hypothyroidism.

08END006 Discuss pharmacologic and non-pharmacologic treatments of thyroid disorders including indications, mechanisms of action, adverse effects, complications and monitoring requirements.

08END007 Discuss normal and pathological histology and physiology of the parathyroid gland.

08END008 Describe the etiologies, clinical manifestations, evaluation, and management of disorders of the parathyroid.

08END009 Describe the normal secretory products of the adrenal gland and discuss etiologies, clinical presentation, pathophysiology and histopathology associated with the adrenal cortex, including: Cushing’s syndrome/disease, Addison’s disease, neoplasms, Waterhouse-Friderichsen syndrome, myelolipomas and neuroblastomas.

08END010 Discuss the clinical presentation, pathophysiology, histopathology, and management of pheochromocytomas and paragangliomas.

08END011 Describe the clinical presentation, gene mutations and histopathology for MEN I, MEN IIA and MEN IIB syndromes.

08END012 Describe the normal physiology of the pineal gland and discuss clinical presentation, pathophysiology and histopathology of pineocytomas, pineoblastomas and germinomas.

08END013 Describe the physiology and histology of the endocrine pancreas and the products it secretes and discuss the pathophysiology, histopathology and clinical presentation of type I and II diabetes and common neoplasms.

08END014 Compare and contrast the characteristic growth curves for constitutional growth delay, acquired growth delay and congenital growth failure and discuss causes and characteristics for each type of growth delay.

08END015 Discuss the pathology, clinical presentation and hormone changes associated with prolactin production abnormalities and be able to identify iatrogenic and non-iatrogenic causes.

08END016 Discuss the clinical presentation, pathophysiology and treatment of growth hormone hyperfunction and hypofunction.
08END017 Describe the clinical presentation, pathophysiology and pharmacologic and non-pharmacologic treatments of pituitary hyperfunction and hypofunction.

08END018 Describe the mechanism of action and adverse effects of the pharmacologic administration of pituitary and hypothalamic hormones, their analogs, and antagonists.

**Skin**

08INT001 Discuss skin structure and function.

08INT002 Define the different descriptive terms used in dermatology nomenclature, and be able to describe dermatological lesions using these terms properly.

08INT003 Describe the classification of sunscreens and the significance of each type. Describe additional methods of sun protection.

08INT004 Discuss the major pathogens in bacterial skin infections and their associated virulence factors.

08INT005 Compare and contrast the difference between exogenous skin infections, endogenous skin infections and toxin-induced skin diseases. Discuss the diseases that occur in each of the above categories including: epidemiology, clinical presentation, pathophysiology, diagnosis and treatment.

08INT006 Describe the epidemiology, presentation, pathophysiology, transmission, diagnosis and treatment for viral exanthems.

08INT007 Discuss the presentation, pathophysiology, treatment and diagnosis of vascular dermatoses, eczematous dermatitis, bullous dermatoses and other cutaneous autoimmune diseases.

08INT008 Describe the clinical presentation, risk factors and histopathology of common skin tumors including: melanocytic nevi, epithelial nevi, cysts, benign epithelial tumors, precanceroses, mesenchymal tumors, cutaneous lymphomas, cutaneous histiocytoses and malignant epithelial tumors.

08INT009 Describe the cutaneous presentations of drug reactions, with special emphasis on differentiating mild (i.e., urticarial, fixed drug eruption) from severe (i.e., Steven-Johnson syndrome, warfarin necrosis) forms.

08INT010 Describe the clinical, epidemiological and morphological features of psoriasis including: Auspitz sign, Munro microabscesses and Koebner phenomenon. Discuss the basic pathophysiology, systemic complications and treatment of psoriasis.

08INT011 Describe the epidemiology, diagnosis, clinical presentation, histopathology, prognosis, clinical types, morphological types and treatment of melanoma.
08INT012 Discuss the differences among the various traumatic and atraumatic musculoskeletal diagnoses, and discuss the common interventions appropriate for a variety of musculoskeletal conditions.

08INT013 Discuss the effects of high temperature and low temperature thermal injury (e.g., heatstroke, frostbite), differentiate between 1st, 2nd, and 3rd degree burns, and describe the rule of 9’s.

08INT014 Compare and contrast the mechanisms of action, indications and toxicities of traditional NSAIDs and COX-2 inhibitors.

08INT015 Describe the mechanisms of action, indications and toxicities of disease-modifying antirheumatic drugs (DMARDs) and drugs used in the management of acute and chronic gout.

08INT016 Discuss the etiology, pathogenesis and clinical features of infections affecting bones, joints and soft tissue, including: infective arthritis, osteomyelitis, Lyme disease and gangrene.

08INT017 Describe the causes, clinical presentation, treatment and life history of common skin ectoparasites.

08INT018 Describe the criteria, pathophysiology and management for different types of shock.

08INT019 Discuss the use of the Parkland Formula in fluid resuscitation for burn patients.

08INT020 Describe the different types of transplants and the forms of rejection that may occur in a transplant patient.

08INT021 Demonstrate the dermatologic exam, describe abnormal findings, and identify resources related to dermatologic issues.

**Skeletal System and Soft Connective Tissue**

08MUS001 Describe the pathogenesis, pathophysiology, clinical presentation and unique radiologic findings for common genetic bone dysplasias and skeletal deformities.

08MUS002 Discuss the mechanisms of action, indications and adverse effects of osteoporosis medications including: calcium, vitamin D, estrogen, SERMs, bisphosphonates, calcitonin and PTH.

08MUS003 Describe the pathophysiology and clinical presentation for the most common types of tumors of soft tissue and bone.

08MUS004 Discuss the process of bone remodeling and how it is relevant in osteoporosis, Paget’s disease and fracture repair.

08MUS005 Discuss the etiologies, clinical presentations, pathophysiology and treatments for osteoarthritis, rheumatoid arthritis, polymyositis, rhabdomyolysis and gouty arthritis.
Describe the bone related complications of systemic syphilis and tuberculosis.

**Psychiatry**

08PSY001 Compare and contrast the various anxiety disorders and the different treatment approaches.

08PSY002 Describe the classification and management principle for personality disorders.

08PSY003 Describe Child and Adolescent specific diagnosis, DSM IV diagnosis (as opposed to adult) and management.

08PSY004 Discuss the diagnosis, prevalence, complications and management of eating disorders.

08PSY005 Describe the clinical presentation, neurobiology and management principle of mood disorders, and schizophrenia.

08PSY006 Discuss epidemiology, risk assessment, and management of suicide.

**Pharmacology**

08PHR01 Describe the pharmacology of antidepressants, sedative-hypnotics, antipsychotics and mood stabilizing medications.

**Substance Abuse**

08SUB001 Discuss diagnostic criteria, pathophysiology, clinical presentation and various psychoactive substances in substance use disorders.

08SUB002 Describe epidemiology, risk factors, treatment and prevention for problem alcohol use in women

**Patient Safety**

08PSQ001 Describe the EMS system, patient transportation preparation and federal laws relating to patient transportation.

08PSQ002 Describe safety practices, aseptic and sterile technique in surgical areas.

08PSQ003 Describe OSHA protocol and management resources for blood borne pathogens, tuberculosis, and antibiotic resistant organisms.

**Clinical Skills**

08CSK001 Demonstrate the complete history and physical with a standardize patient.
**Patient Wrap-Up**

PWU-SEI001 Observe and reflect on the patient's experience with disease and the ways in which disease impacted the patient's occupation, finances, and family.

PWU-SEI002 Observe and reflect on patient's experience with the healthcare system.

PWU-SEI003 Observe and reflect on the coping skills used by the patient.

PWU-DPR001 Observe and evaluate the professional values exhibited by the physician.

PWU-DPR002 Observe and evaluate the communication skills of the physician.

PWU-DPR003 Observe and evaluate the patient-centeredness exhibited by the physician.

PWU-CSK001 Observe and evaluate the clinical reasoning skills exhibited by the physician.

PWU-CSK002 Apply basic science concepts to patient diagnoses and treatment.

**Patient-Centered Learning (PCL)**

PCL-CSK001 Demonstrate the ability to define and solve clinical problems based on a patient case.

PCL-CSK002 Demonstrate the ability to apply knowledge of basic sciences to clinical manifestations and presentation in a patient case.

PCL-CSK003 Demonstrate the ability to generate hypotheses based on the clinical presentation and underlying pathogenesis of disease in a patient case.

PCL-PTE001 Demonstrate the ability to actively listen to and reflect on information presented or discussed in learning objectives by other students.

PCL-PTE002 Demonstrate the ability to deliver concise, clear, scientifically-based presentations or discussions of learning objective topics.

PCL-PTE003 Demonstrate the ability to display knowledge of subject area in learning objective presentation that is beyond information covered in presentation or discussion.

PCL-PIF001 Demonstrate the ability to generate learning objectives based on deficiencies in the student's understanding of a patient case.

PCL-PIF002 Demonstrate the ability to gather evidence-based information from multiple resources that is relevant and sufficient to address learning issues generated from a patient case.

PCL-PIF003 Demonstrate responsibility to team through leadership and fulfillment of group duties.

PCL-PIF004 Demonstrate ability to assess learning needs, strengths, and limitations.

PCL-PIF005 Demonstrate ability to respond appropriately to feedback.

PCL-PIF006 Demonstrate ability to treat others in team with respect, show openness to different views, and discuss differences non-judgmentally.

PCL-PIF007 Demonstrate effort to continuously strive for excellence in all activities.