

## The Brain: Nervous System and Behavior (Brain) – FOM2

FM-201 160 course hours

Updated March 2021

*BRAIN: Nervous System and Behavior* is a second-year course organized as three interrelated tracks that cover **Clinical Neuroanatomy, Neurology / Neuropathology, and Psychiatry /Behavior**. Pharmacology and Neuroimaging are interwoven throughout the Tracks. The course considers disorders of the nervous system and behavior as disorders of the whole person, taking into account genes, neurological substrate, behavior, and environment. *BRAIN* includes large group interactive lectures and case conferences, as well as smaller group conferences, laboratories, and discussion groups. In all these formats, thoughtful analysis and synthesis of information and its clinical applications is emphasized.

After completion of the three Brain tracks, the learner will be able to:

- Recall the components of each major motor and sensory system as well as systems serving emotion, memory and cognition, and describe the functional and clinical consequences of damaging, disconnecting or exciting it in different regions of the nervous system to the extent that well-supported clinical information exists (Physician as a Scientist and Clinical Problem Solver)
- Describe how the activity and connections of individual neurons may support complex brain functions, and how these structures and connections are established during development and become modified by experience (Physician as a Scientist)
- Identify major, clinically important structures in gross and in sectioned stained material, and in common clinical imaging techniques including computed tomography (CT) and magnetic resonance imaging (MRI), thus demonstrating an understanding of the 3D relationships between anatomic components (Physician as a Scientist)
- Recognize and name the general and specific structural changes (as seen in gross and microscopic pathologic specimens, and in commonly-used neuroimaging techniques) that form the basis of abnormal brain function and disease (Physician as a Scientist and Clinical Problem Solver)
- Recognize and/or recall basic information about major categories of neurologic (CNS/PNS) and psychiatric disorders including: Epidemiology, Etiology, Pathophysiology, Diagnosis, Prognosis, Basis of therapeutic options, Prevention, and Potential effects on patients, families, communities, including Social Determinants of Health (Physician as a Scientist, Clinical Problem Solver, Professional, and Advocate)
- Describe key features of normal nervous system development and function across the lifespan, and of the major neurologic and psychiatric disorders that most often affect the pediatric age group, and those that most often affect the elderly (Physician as a Scientist and Clinical Problem Solver)
- Demonstrate knowledge of non-pharmacologic and pharmacologic treatments of neurologic and psychiatric disorders: mechanisms, major actions, common and critical side effects, and their specific uses (Physician as a Scientist and Clinical Problem Solver)
- Demonstrate clinical problem solving skills at a level appropriate for a Foundations of Medicine 2 student (Physician as a Clinical Problem Solver)

Learner competency is assessed by both individual and team-based responses to MCQ and short answer questions that are often based on case vignettes or full case presentations.

**Course Co-Leaders**

Kate Daniello, MD

Sue Gagliardi, PhD

Mai-Lan Rogoff, MD

Tom Smith, MD

**Director of Neuroimaging in Brain**

Andrew Chen, MD

**Director of Pharmacology in Brain**

Mark Dershwitz, MD, PhD