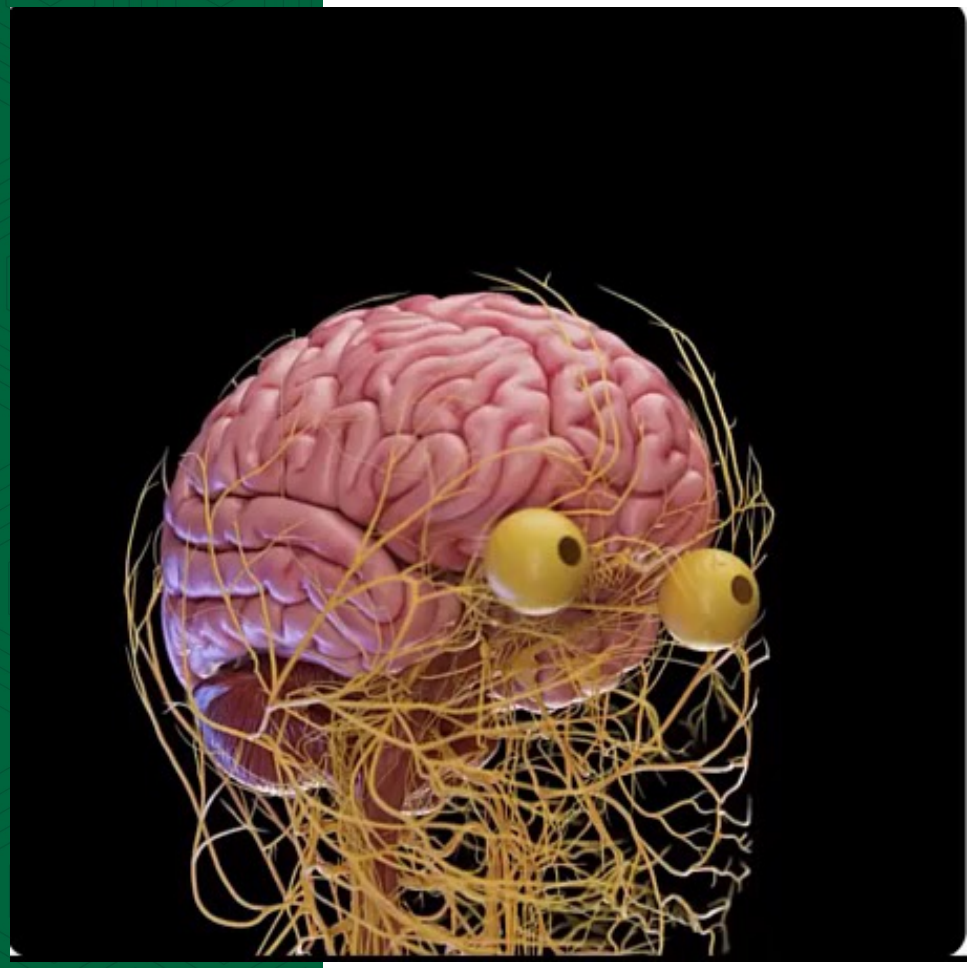
Medical Neuroscience:
"a mind expanding experience"



Neuroscience Education Retreat

Steele Taylor MD

October 2023

The University of Vermont
LARNER COLLEGE OF MEDICINE

Course Overview

9 weeks

109 learning sessions

154 hours of content

Broad Scope

- **Basic Neuroscience Content**
  - Anatomy (including gross anatomy), physiology, development, imaging, pathology, pharmacology, genetics
- **Clinical Neurology Content**
  - Neuro-oncology, neuro-infectious, spinal cord disorders, MS, neuromuscular disorders, headache/migraine, movement disorders, stroke, seizures/epilepsy, sleep disorders, dementia, coma/brain death, pedi neuro, **etc. etc. etc.**
- **Clinical Psychiatry Content**
  - Anxiety, mood disorders, schizophrenia/psychosis, impulse control, self-harm, etc. etc. etc .
- **Additional Content Areas**
  - Ophthalmology, Audiology/ENT, Anesthesiology, Neuro-Ethics, Substance use disorders

Course Goals

Overarching Goals

1. Provide **foundational knowledge** in neurology and psychiatry needed to approach clinical encounters
2. Introduce **neurologic method** of localization and **diagnostic reasoning**
3. Provide understanding of nervous system **relationship to other organ systems**
4. **Demystify** the nervous system and mitigate neurophobia

Week	Basic Science Theme	Tuesday Lab Theme	Clinical Highlights	Simulation
1	Nervous System Overview, Histology, Neuro-Pathology	Nervous System Overview	Neuro-Oncology	
2	Neurotransmission Spinal Cord	Spinal Cord	Neuro-Infectious Disease	In-Person Lumbar Puncture Session
3	Brainstem, Cranial Nerves, Diencephalon	Brainstem & Cranial Nerves	Multiple Sclerosis and Demyelinating Disorders	CSL: Neurologic Examination
4	Special and Somatic Sensory Systems, Pain	Forebrain, Cerebrum	Ophthalmology, Auditory Headache / Migraine	Virtual POCUS: Ocular
5	Motor Systems Basal Ganglia, Cerebellum		Neuromuscular Disorders Movement Disorders	Parkinson's Patient Panel, **CSE**
6	Blood supply, Acute CNS Injury	Blood Supply	Stroke, Hemorrhage Trauma, Coma, Brain Death	
7	Development, Cognition Neurodegeneration	Coronal Cross Sections and Limbic System	Cognitive domains, Neurodegeneration, Dementia, Communication disorders	
8	Psychiatry – Behavior, Mood, Neuropsychology	Basal Ganglia and Horizontal Sections	Mood Disorders, Psychosis, Therapy, Suicide, Substances, Sleep Disorders, Seizures & Epilepsy	CSL: Mental Status Exam POCUS - nerve
9	Wrap Psychiatry / EXAMS	Lab Practicum (Thursday)	Wrap Psychiatry / EXAMS	

Patient Experience Sessions

Format: interview patient/collateral, show relevant exam findings, discuss diagnostic reasoning process, debrief on diagnosis/pathogenesis, management, show relevant imaging findings, open questions from students

- Week 1 - Neuro-oncology: High Grade Glioma
- Week 2 - Spinal Cord: Amyotrophic Lateral Sclerosis
- Week 3 - Demyelinating Disorders: Multiple Sclerosis
- Week 5 - Parkinson's Disease Patient Panel
- Week 6 – Cerebrovascular: Bilateral PCA Stroke
- Week 8 - Neurocutaneous Disorders: 2 generations of NF1
- Week 8 – Degenerative Disorders: FTD/PPA

Student Feedback – Patient Sessions

- "Patient Experiences: this was a true highlight of, honestly, my first year. I don't think I'll ever forget those experiences."
- "Patient panels in particular were absolutely fantastic."
- "I really love the patient experience sessions. They're by far my favorite part of the course."
- "…I loved the patient experience sessions and felt that they helped me gain a greater understanding of those conditions."
- "I loved having patients come in and tell us about their stories. This was unique to med neuro and made the course feel really special."
- "The patient cases were great, and really helped provide clarity on the topics. It was really great to see how it impacted patients and helped the topic stick."
- "There were a lot of active sessions, either hands on practicing skills or talking with patients. I think it was very meaningful to have these things where we meet people that we could actually help one day and then learn the skills to actively help them."
- "The patient experiences were the most conducive to my learning. Being able to interact with folks that had neurodegenerative diseases really helped me understand the conditions and how they impacted the patients."

Medical Neuroscience

"it's a lot to juggle"

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