

NEUROLOGY

Required Clerkship

Clerkship website: <http://courses.washington.edu/neural/index.html>. Additional site specific information is at <http://courses.washington.edu/neural/sites/index.html>.

NEURL P- Introduction to Neurology (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Total Enrollment:	20 students per rotation.
Location:	Washington, Idaho, Montana, Alaska
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

Goals and Objectives

Student CORE goals and objectives:

1. Learn the neurological exam.
 - **Curriculum:** Residents, attendings and preceptors in the hospital and clinic settings will teach the advanced neurological exam. During Thursday didactics in Seattle, a systematic review of the neurological exam will occur.
 - **Benchmark:** Two parts of the neurological exam will be benchmarked. The reflex and sensory exams. To learn the exams you will practice them in Thursday didactics, and you can read about the exams and watch a video by going to [Mini-CEX](#).
 - **Test:** Demonstrate either the reflex or sensory exam benchmark in a clinical setting while observed by your preceptor. The CEX cards are incorporated into the pocket syllabus. You must repeat the CEX until a pass score is achieved. Cards will be collected at the end of the course.
2. Learn localization in neurology.
 - **Curriculum:** For this course, the nervous system will be divided into 7 levels. They are brain, brain stem, spinal cord, motor neuron, peripheral nerve, neuromuscular junction, and muscle.
 - **Benchmark:** Features of each level will be taught at orientation, reviewed during Thursday didactics, and can be found in the pocket syllabus or by clicking [here](#).
 - **Test:** Six [cases](#) will be assigned during the clerkship. Localization is an integral part of each web-based case. Answers are emailed to the clerkship director for review, and case discussion will occur during Thursday didactics or by video lecture for WWAMI students.
3. Understand a bioethical issue in neurology.
 - **Curriculum:** Bioethical issues arise frequently in neurology. You are required to identify, observe, and reflect on at least one clinical scenario during the clerkship.
 - **Benchmark:** Three bioethical issues will be benchmarked. Each issue is linked to the Ethics In Medicine website. They are [Breaking Bad News](#), [Do Not Resuscitate Order](#), and [Termination of Life-Sustaining Treatment](#). See the [Mini-CEX](#) tab for details.
 - **Test:** Write a reflection on one of the three bioethical options, and email to the clerkship director for review.
4. Have clinical exposure to several neurological diseases.
 - **Curriculum:** It is expected that students will have broad exposure to patients with neurological disease no matter what site they are assigned.
 - **Benchmark:** See at least one patient in each of the following 7 categories: demyelinating disease, dizziness, headache, movement disorder, neuromuscular disease, seizure disorder, and cerebrovascular disease.

- **Test:** On a daily basis, students will log their patients in the pocket syllabus. At the end of each of the first three weeks you will need to record the data by going to the [patient log](#) tab. If, at the end of three weeks, you have not seen a patient in each of the first seven categories, please do the appropriate on-line case, which automatically emails your answer to the clerkship director, and read the appropriate chapter in Clinical Neurology, Lange, 6th edition.
5. Receive mid-rotation feedback
- **Curriculum:** Feedback should be continuous throughout the 4-weeks. In order to ensure that is happening, we are putting you, the student, in charge. A [feedback card](#) has been developed for this purpose. Please read the instructions on the front, which urges you to ask for frequent feedback from attendings, preceptors and residents. Keep in mind that feedback should be both positive and negative.
 - **Benchmark:** All students should receive mid-rotation feedback. Feedback given after the first two weeks of the clerkship should allow you to improve your performance for the second two weeks. See [student evaluation](#) tab.
 - **Test:** The clerkship evaluation form has a question concerning mid-rotation feedback.

Student DESIRED Goals and Objectives

1. Formulate a differential diagnosis for patients with neurological symptoms.
2. Know when to order and how to interpret common tests used in diagnosing neurological disease.
3. Understand the management principles for common neurological diseases.
4. (Ideally) Perform a lumbar puncture.

Readings/Texts:

Resources to accomplish the learning objectives include general medical and neurology textbooks, didactic lectures, attendings/residents/students, and web based information. See <http://courses.washington.edu/neural/indstudy.html> for specific recommendation(s).

CLERKSHIPS SITES

ALASKA

NEURL 634: P-Introduction to Neurology - Anchorage (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 students per year.
Location:	Anchorage, AK
Facility:	Alaska Native Medical Center
Site Coordinator:	Brian Trimble, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	The MAC 505 apartment is located within walking distance to the clinic. It is a 4-bedroom apartment that is located on the 3 rd floor. The apartment has four bedrooms labeled A, B, C, and D. The apartment has one bathroom, kitchen, and storage area. The kitchen has all of the necessary cooking ware, full-size refrigerator, oven, stove and small appliances (coffee pot, microwave). Students pay for their own food and use the kitchen for preparing meals.
Transportation:	A shared car is available to student on site.

IDAHO

NEURL 643: P-Introduction to Neurology – Dr. Lyons, Boise (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per year.
Location:	Boise, ID
Facility:	Boise Neurological Assoc.
Site Coordinator:	George Lyons, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided through St. Luke's hospital in a fully furnished, 1 bedroom, non-smoking, residence inn-style apartment with a queen bed and kitchenette. Pets are not permitted.
Transportation:	Car required.

NEURL 644: P-Introduction to Neurology – Dr. Vincent, Idaho Falls (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per 4-week rotation.
Location:	Idaho Falls, ID
Facility:	Eastern Idaho Neurologic Assoc.
Site Coordinator:	Stephen Vincent, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is not provided at this site. Only students who have housing and transportation in the area will be permitted to enroll at this site.
Transportation:	Car required.

NEURL 645: P-Introduction to Neurology – Dr. Garland, Idaho Falls (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	5 students per year.
Location:	Idaho Falls, ID
Facility:	Idaho Falls Neurology
Site Coordinator:	Erich W. Garland, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided in a furnished studio apartment with a queen bed and kitchenette. Pets are not permitted.
Transportation:	Car required.

NEURL 647: P-Introduction to Neurology – Dr. Lindholm, Boise (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	6 students per year.
Location:	Boise, ID
Facility:	Idaho Neurology at St. Alphonsus
Site Coordinator:	Karin M. Lindholm, DO
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided through St. Luke's hospital in a fully furnished, 1 bedroom, non-smoking, residence inn-style apartment with a queen bed and kitchenette. Pets are not permitted.
Transportation:	Car required.

NEURL 648: P-Introduction to Neurology – Dr. Coats, Coeur d'Alene (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	5 students per year.
Location:	Coeur d'Alene, ID
Facility:	Michael Coats, MD
Site Coordinator:	Michael Coats, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided. See course website for details.
Transportation:	Car required.

MONTANA

NEURL 640: P-Introduction to Neurology - Billings Clinic(8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	6 students per year.
Location:	Billings, MT
Facility:	Billings Clinic
Site Coordinator:	Daniel Rodriguez, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided in a six-bedroom house shared with other UW students. The house has DSL and a desk top and wireless Internet access.
Transportation:	Car required.

NEURL 639: P-Introduction to Neurology – Neurology Associates, Billings (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	6 students per year.
Location:	Billings, MT
Facility:	Neurology Associates
Site Coordinator:	Lowell Quenemoen, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided in a six-bedroom house shared with other UW students. The house has DSL and a desk top and wireless Internet access.
Transportation:	Car required.

NEURL 638: P-Introduction to Neurology - Great Falls (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	6 students per year.
Location:	Great Falls, MT
Facility:	Advanced Neurology Specialists
Site Coordinator:	William Henning, DO
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is in a 2-bedroom apartment and is shared with another student.
Transportation:	Car required.

NEURL 637: P-Introduction to Neurology - Missoula (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	4 students per year.
Location:	Missoula, MT
Facility:	Montana Neurobehavioral Specialists
Site Coordinator:	John D. Schaeffer, DO
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided. See course website for details.
Transportation:	Car required.

WASHINGTON

NEURL 664: P-Introduction to Neurology - Burien (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per year.
Location:	Burien, WA
Facility:	South Seattle Neurology Associates
Site Coordinator:	Ming Chow, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Transportation:	Car required. Mileage is not reimbursed.

NEURL 659: P-Introduction to Neurology – NW Neurology, Lakewood (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	3 students per year.
Location:	Tacoma, WA
Facility:	Northwest Neurology
Site Coordinator:	Lia Guina, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	One-bedroom apartment or extended-stay hotel with kitchenette (depending on apartment availability). No pets.
Transportation:	Car required.

NEURL 663: P-Introduction to Neurology – Group Health, Eastside (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per year.
Location:	Redmond, WA
Facility:	Group Health Cooperative
Site Coordinator:	Brian Ito, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Transportation:	Car required. Mileage is not reimbursed.

NEURL 658: P-Introduction to Neurology - Olympia Neurology(8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 or 3 students per year.
Location:	Olympia, WA
Facility:	Olympia Neurology
Site Coordinator:	Greg Bell, MD
Faculty Contact:	Eric Kraus, M.D.

Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided at a nearby extended-stay hotel with kitchenette.
Transportation:	Car required.

NEURL 665: P-Introduction to Neurology - UWMC (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 students per 4-week rotation.
Location:	Seattle, WA
Facility:	UWMC
Site Coordinators:	Eric Kraus, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 666: P-Introduction to Neurology - HMC (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	4 students per 4-week rotation.
Location:	Seattle, WA
Facility:	Harborview Medical Center
Site Coordinators:	Andrew Rose-Innes, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 667: P-Introduction to Neurology - VA (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 students per 4-week rotation.
Location:	Seattle, WA
Facility:	Veteran's Administration, Puget Sound
Site Coordinator:	Gregg Meekins, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 668: P-Introduction to Neurology - Northwest Hospital (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per 4-week rotation.
Location:	Seattle, WA
Facility:	Northwest Hospital
Site Coordinator:	Victor Erlich, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 669: P-Introduction to Neurology - Virginia Mason (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per 4-week rotation.
Location:	Seattle, WA
Facility:	Virginia Mason Medical Center
Site Coordinator:	John Ravits, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 671: P-Introduction to Neurology - Swedish (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 students per rotation.
Location:	Seattle, WA
Facility:	Swedish Neurosciences, Cherry Hill; Student will also rotate at Minor and James
Site Coordinator:	Lily Jung, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 672: P-Introduction to Neurology - Group Health, Seattle (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per year.
Location:	Seattle, WA
Facility:	Group Health Cooperative
Site Coordinator:	Rich Mesher, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu

NEURL 654: P-Introduction to Neurology – Dr. Greeley, Spokane (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 students per year.
Location:	Spokane, WA
Facility:	Northwest Neurological
Site Coordinator:	David Greeley, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is provided. See course website for details.
Transportation:	Car required.

NEURL 655: P-Introduction to Neurology – Dr. Rojas, Spokane (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	4 students per year.
Location:	Spokane, WA
Facility:	Sylvia Rojas, MD
Site Coordinator:	Sylvia Rojas, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Housing is shared in a two-bedroom apartment with another student.
Transportation:	Car required.

NEURL 660: P-Introduction to Neurology - Madigan (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per 4-week rotation.
Location:	Tacoma, WA
Facility:	Madigan Army Medical Center
Site Coordinator:	Jay C. Erickson, MD, PhD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	One-bedroom apartment on base. No children. No pets.
Transportation:	Car required.

NEURL 661: P-Introduction to Neurology - Neurology and Neurosurgery Associates, Tacoma (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	3 students per year.
Location:	Tacoma & Puyallup, WA (2 weeks at each clinic)
Facility:	Neurology & Neurosurgery Associates
Site Coordinator:	Peter Kwon, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	One-bedroom apartment or extended-stay hotel with kitchenette (depending on apartment availability). No pets.
Transportation:	Car required.

NEURL 662: P-Introduction to Neurology – Group Health, Tacoma (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	2 students per year.
Location:	Tacoma, WA
Facility:	Group Health

Site Coordinator:	Thomas W. Kushner, DO
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	One-bedroom apartment or extended-stay hotel with kitchenette (depending on apartment availability). No pets.
Transportation:	Car required.

NEURL 656: P-Introduction to Neurology - Wenatchee (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per rotation.
Location:	Wenatchee, WA
Facility:	Wenatchee Valley Medical Center, Department of Neurology
Site Coordinator:	Joseph Tornabene, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	Fully-furnished apartment with phone and Internet access. No pets. Within walking distance to neurology clinic.
Transportation:	Car required.

NEURL 657: P-Introduction to Neurology – Dr. Sloop, Yakima (8)

Offered:	AWSpS; 4 weeks.
Prerequisite:	Medicine, or Family Medicine, or Surgery, or Pediatrics for third-year students. Third- and fourth-year medical student.
Enrollment:	1 student per year.
Location:	Yakima, WA
Facility:	Richard Sloop, MD
Site Coordinators:	Richard Sloop, MD
Faculty Contact:	Eric Kraus, M.D.
Administrative Contact:	Goldie Pontrelli, 206-616-6992, neural@u.washington.edu
Housing:	One-bedroom apartment or extended-stay hotel with kitchenette (depending on apartment availability). No pets.
Transportation:	Car required.

WYOMING Currently there are no Neurology sites in Wyoming.