

PATHOLOGY, MICROBIOLOGY, AND IMMUNOLOGY

Contact the Pathology, Microbiology, and Immunology CST Coordinator (<https://catalog.unmc.edu/medicine/curriculum/phase3/career-speciality-tracks/>) with scheduling questions unless a course administrator is specified for a course in the course description.

PMI 720 ANATOMIC PATHOLOGY 4 Credit Hours

CLINICAL

The M4 students enrolled in this program rotate through the following four divisions of the department: Surgical Pathology, Cytopathology, Hematopathology and Autopsy Pathology. The pathology faculty, fellows and residents teach and supervise the M4 students during this experience. The program duration for each M4 student is one month. We typically take three M4 students each month and can in some situations expand the program to accommodate 1-2 additional students. Students spend a week on each of the three services (Surgical Pathology, Cytopathology, and Hematopathology) with the option of observing an autopsy at any time during the rotation. While on the surgical pathology service, the students spend half of their time in the gross room assisting the pathology resident in the gross examination and processing of surgical specimens. They spend the other half of their time microscopically examining surgical specimens with a staff pathologist and resident. While on the cytology service, the student is involved with the microscopic examination of both gynecologic (GYN) and non-GYN cytology specimens with a staff pathologist and in observing fine needle aspirations (FNA) performed by staff pathologists. Students also participate on the autopsy service where they assist the resident pathologist in performing autopsies. The students are expected to attend all of the 8-9 a.m. resident teaching conferences. The students are also expected to attend one interdisciplinary conference per week. At the end of the rotation, the student is required to give a 15-20 minute presentation to the residents and staff pathologists on an anatomic pathology topic of their choice. Evaluation is based on attendance and participation in the rotation activities and conferences as well as on case presentations and the formal presentation at the end of the rotation. Rotations Offered: Each 4 weeks.

Prerequisite: Pre-arrangement with the Pathology, Microbiology, and Immunology CST Coordinator.

Instructor: Dr. Subodh Lele

Typically Offered: FALL/SPR

Capacity: 3

PMI 721 FORENSIC AND MEDICAL AUTOPSY PATHOLOGY 4 Credit Hours

CLINICAL

This rotation exposes medical students to the practice of the two main types of autopsy: forensic and medical. In it, students will learn the historic and current importance of the practice on understanding of disease processes, their contribution to health care quality, and role in public health. Students will have the opportunity to participate in both types of autopsy. Medical autopsies will be performed at UNMC with members of the Department of Pathology, Microbiology, Immunology. Forensic cases will be performed with volunteer faculty working in cooperation with the Douglas County coroner. Students will complete mock autopsy reports and give a presentation on an interesting case. Rotations Offered: August, September, October, January, February, and March.

Prerequisite: Pre-arrangement with the Pathology, Microbiology, and Immunology CST Coordinator.

Instructor: Dr. Geoffrey Talmon, Dr. Erin Linde, and Dr. Michelle Eliff

Typically Offered: FALL/SPR

Capacity: 1

PMI 722 DERMATOPATHOLOGY SUB-INTERNSHIP 4 Credit Hours

SUB-INTERN

Over the course of a four-week sub-internship, provide medical students with an overview of dermatopathology as a subspecialty, including diagnosis and prognostic and treatment implications of common dermatopathologic diagnoses including melanocytic and non-melanocytic skin neoplasms and inflammatory processes, as well as clinicopathologic correlation with shadowing time in regional pathology dermatology clinics. Rotations Offered: Each 4 weeks.

Prerequisite: Not open to visiting students.

Instructor: Julie Youngs, MD, Dominick DiMaio, MD, Scott Lauer, MD, Dinesh Pradhan, MD, Mary Finnegan, MD, and Blake Helget, MD

Typically Offered: FALL/SPR

Capacity: 1

PMI 723 AUTOPSY SUBINTERNSHIP 4 Credit Hours

SUB-INTERN

Over the course of a four-week sub-internship, provide medical students with an overview of the autopsy service in pathology, including reviewing the patients chart prior to the autopsy procedure, performing the autopsy in conjunction with the pathology resident, review the microscopic slides generated from the autopsy and assisting the resident in writing the autopsy report including the clinicopathologic correlation. Rotations Offered: Each 4 weeks.

Prerequisite: PMI 720. Not open to visiting students.

Instructor: Dominick DiMaio, MD and Kirk Foster, MD

Typically Offered: FALL/SPR

Capacity: 1

PMI 727 HUMAN CYTOGENETICS 4 Credit Hours
CLINICAL

The goal of this course is to familiarize students with clinical genetic testing procedures, including conventional cytogenetics, fluorescence in situ hybridization (FISH), microarray, and sequencing, across a range of areas (prenatal, postnatal, and oncology). Students will become familiar with nomenclature, analysis, and interpretation of genetic studies, and will be introduced to the diagnostic and/or prognostic utility of each assay. At the end of the rotation, the student should appreciate basic safety requirements and compliance regulations of a clinical laboratory, be familiar with assay-specific specimen requirements, be able to describe both the clinical utility and the limitations of various genetic assays, and understand reporting nomenclature and clinical interpretations across the spectrum of genetic tests. Students will also present a short report and discussion of a laboratory technique, result, or diagnosis at the conclusion of the rotation. Rotations Offered: Each 4 weeks

Instructor: Dr. Zhenya Tang
Typically Offered: FALL/SPR
Capacity: 1

PMI 730 LABORATORY MEDICINE FOR THE PRACTICING PHYSICIAN 4 Credit Hours
NON-CLINIC

This month-long rotation is designed to give all medical students practical education in, be better consumers of, and make more effective use of laboratory services, regardless of their chosen specialty. Throughout the rotation, students will be exposed to the basics of how laboratory tests are done, common sources of error, an overview of office laboratory testing, how to evaluate the utility of new laboratory tests, and the critical role that pathologists and other laboratory professionals play in patient care. Instruction will occur through the lens of practical clinical cases via a mixture of didactic lectures, small group activities, and working with a pathologist that outline the gamut of services included within anatomic and clinical pathology. Students will be evaluated by their engagement in group activities, performance on an end-of-rotation assessment, and a short presentation. Rotations Offered: May, June, September, October, January, and February.

Instructor: Dr. Aleh (Oleg) Bobr and Dr. Ana Yuil-Valdes
Typically Offered: FALL/SPR
Capacity: 5

PMI 760 PATHOLOGY, MICROBIOLOGY, AND IMMUNOLOGY AWAY CLINICAL 4 Credit Hours
SUB-INTERN

A rotation at another educational institution requiring entry through third-party application platforms (e.g., VSLO), often associated with an outside academic institution or residency program. Rotations Offered: Each 4 weeks.

Prerequisite: An approved Away Rotation Application. Not open to visiting students.
Typically Offered: FALL/SPR
Capacity: Variable

PMI 761 PATHOLOGY, MICROBIOLOGY, AND IMMUNOLOGY AWAY NON-CLINICAL 4 Credit Hours
NON-CLINIC

A rotation at another educational institution requiring entry through third-party application platforms (e.g., VSLO), often associated with an outside academic institution or residency program. Rotations Offered: Each 4 weeks.

Prerequisite: An approved Away Rotation Application. Not open to visiting students.
Typically Offered: FALL/SPR
Capacity: Variable

PMI 764 PATHOLOGY, MICROBIOLOGY, AND IMMUNOLOGY OFF-CAMPUS PRECEPTORSHIP 4 Credit Hours
SUB-INTERN

A pre-arranged rotation occurring under the supervision of volunteer faculty not accessed through a third-party application platform, usually at a regional private clinic within the state of Nebraska. Rotations Offered: Each 4 weeks.

Prerequisite: An approved Off-Campus Preceptorship Application. Not open to visiting students.
Typically Offered: FALL/SPR
Capacity: Variable

PMI 799 SPECIAL TOPICS 4-6 Credit Hours
NON-CLINIC

Students interested in specific aspects of pathology or desiring a background in pathology for a clinical specialty may undertake intensive study with the staff pathologist(s). The department faculty has diverse interests to complement the needs of most students. These rotations may be tailored to include clinic-pathologic study, or basic research. Students will be expected to attend appropriate resident conferences and interdisciplinary conferences related to the specialty area they are studying as agreed upon by their supervising faculty. Independent study may also be arranged with pathology faculty not listed here. Specialty-Staff: Cardiovascular Pathology-Drs. Radio. Clinical Chemistry-Drs. Bobr, Williams, Cox, Koepsell, and Fyffe-Freil. Cytology-Drs. Lele, Radio, Wagner, and Yuil-Valdes. Dermatopathology/Soft Tissue-Drs. DiMaio, Youngs, Pradhan, and Lauer. ENT/Lung-Drs. Swanson, Padhan, and Wagner. Flow Cytometry-Drs. Cannatella, Hafeez, and Gupta. Gastrointestinal Pathology-Drs. Lazenby, Talmon, Cohen, Swanson, and Fisher. Gynecologic and Breast Pathology-Drs. Lele, Edgerton, and Wagner. Hematopathology-Drs. Greiner, Khoury, Cannatella, Hafeez, and Gupta. Microbiology/Public Health Microbiology-Drs. Fey (Director), and, Iwen. Molecular Pathology-Drs. Cushman-Vokoun, Cox, and Cathcart. Neuropathology-Drs. Chen and Cathcart. Renal Pathology-Drs. Foster and Talmon. Transfusion Medicine-Drs. Koepsell, Bobr, Cox, and Williams. Transplantation Pathology-Drs. Radio, Talmon, Swanson, Fisher, and Markin. Urologic Pathology-Dr. Lele. Virology-Dr. Hinrichs.

Typically Offered: Each four weeks by Arrangement with Dra. Lele and Wagner. Rotations Offered: Each 4 weeks.
Capacity: 1 per specialty