**Histology Thread Map**

## Overview

* Histology content is presented throughout the pre-clerkship curriculum. This content introduces normal light microscopic and ultrastructural anatomy of tissues and organs, while integrating content that explains how these structural features reflect the physiologic function of the tissue/organ under study. A firm grasp of normal microscopic structure of these tissues/organs provides a bridge toward an understanding of how histopathologic alterations of these same tissues and organs are reflected in patients’ clinical signs and symptoms. The histology content throughout the preclerkship curriculum is centered around Histology Laboratory Sessions. The Laboratory content also integrates associated course lecture content pertinent to each Laboratory Session.
* Basic concepts of microscopy and cytology are introduced in the Fundamentals and Cytology Laboratory Sessions in OST 520 (“Foundations of Biomedical Science for Osteopathic Medicine”) in semester 2. These concepts build on each other as students move into the Connective Tissue Proper, Epithelium, and Lymphatic System Laboratory Sessions. Sequencing of these and subsequent Laboratory Sessions allows students to build on knowledge gained in previous Laboratory Sessions. These Laboratory Sessions then begin to link into Basic Pathology concepts presented in the Cellular Adaptations and Cell Injury Laboratory Session.
* In OST 521 (“Musculoskeletal System”) and OST 522 (“Hematology, Oncology, and Infectious Diseases”), four Histology Laboratory Sessions center around the musculoskeletal and nervous systems and the hematologic and vascular systems. Concepts learned in these Histology Laboratory Sessions provide a bridge toward an understanding of the content delivered during three Pathology Laboratory Sessions (Inflammation and Healing, Hemodynamic Disorders, Neoplasia) also presented within these courses.
* In OST 525, OST 526, OST 532, OST 533 and OST 535, Histology Laboratory Sessions are centered around the system being covered within that course. All of the Histology Laboratory Sessions and associated lecture content is designed to familiarize students with normal microscopic anatomy. In addition, each Laboratory Session provides a structural view of various physiologic functions. The firm grasp of tissue/organ histologic normals gained within the preclerkship curriculum acts as preparation for an understanding of how structural alterations seen in various pathologic processes are manifested in patients’ clinical presentations.

## Framework

* Histology describes normal tissue structure at the light microscopic and ultrastructural levels. As histology is presented in the pre-clerkship curriculum, the understanding of tissue structure is closely integrated with content that describes how this structure reflects normal tissue/organ physiologic function.

## Semester 1

**OST 510 – Clinical Human Gross Anatomy**

* None

**OST 550 – Introduction to Osteopathic Medicine and Clinical Skills**

* None

## Semester 2a

**OST 520 – Foundations of Biomedical Science for Osteopathic Medicine**

* Fundamentals Laboratory Session
* Cytology Laboratory Session
* Connective Tissue Proper Laboratory Session
  + See also in the Physiology thread Dr. Xiao’s lecture sequence covering Connective Tissue
* Epithelium Laboratory Session
  + See also Dr. Kennedy’s lecture entitled “Epithelial Tissue”
* Lymphatic System Laboratory Session
  + See also in the Physiology thread Dr. Schwartz’ lecture sequence entitled “Lymphatic System”

**OST 551 – Osteopathic Patient Care**

* None

**OMM 511 – Osteopathic Manipulative Medicine**

* None

## Semester 2b

**OST 521 – Musculoskeletal System**

* Cartilage and Bone Laboratory Session
  + See also in the Physiology thread Dr. Schwartz’ lecture sequences entitled “Cartilage and Bone 1” and “Cartilage and Bone 2”
* Nerve Tissue Laboratory Session
  + See also in the Physiology thread Dr. Crandall’s lecture entitled “Overview of Nerve Tissue”
* Skeletal, Cardiac and Smooth Muscle Laboratory Session
  + See also in the Physiology thread Dr. McMahon’s (Slade’s) lectures entitled “Overview of skeletal muscle” and “Ultrastructure of muscle fiber”

**OST 522 – Hematology, Oncology, and Infectious Disease**

* Hematologic and Vascular Systems Laboratory Session
  + See also Dr. Kennedy’s lecture entitled “Vascular System Histology”

## Semester 3a

**OST 523 – Neurological System**

* None

**OST 524 – Psychopathology**

* None

**OST 552 – Osteopathic Patient Care**

* None

**OMM 512 – Osteopathic Manipulative Medicine**

* None

## Semester 3b

**OST 525 – Genitourinary System**

* Urinary System Laboratory Session
  + See also Dr. Nazaroff’s lecture entitled “Histology of the Urinary System”

**OST 526 – Endocrine System**

* Endocrine System Laboratory Session
* Male Reproductive System Laboratory Session
  + See also in the Physiology thread Dr. Schwartz’ lecture sequence entitled “Physiology of Reproduction 2: Anatomy & Histology of the Male”
* Female Reproductive System Laboratory Session
  + See also in the Physiology thread Dr. Schwartz’ lecture sequences entitled “Physiology of Reproduction 4: Female Reproductive System Anatomy & Histology” and “Physiology of Reproduction 7: Placental Development”

## Semester 4

**OST 531 – Reproduction, Development, and Sexuality**

* None

**OST 532 – Integumentary System**

* Integumentary System Laboratory Session
  + See also Dr. Kennedy’s lecture entitled “Integumentary System Histology”

**OST 533 – Gastrointestinal System**

* Digestive System I Laboratory Session - Oral Cavity and Digestive System Glands
  + See also Dr. Kennedy’s lectures entitled “Histology of the Digestive System Part 1: Oral cavity, salivary glands and pancreas” and “Histology of the Digestive System Part 2: Liver and gallbladder”
* Digestive System II Laboratory Session - Alimentary Canal
  + See also Dr. Kennedy’s lectures entitled “Histology of the Digestive System Part 3: Esophagus and stomach” and “Histology of the Digestive System Part 4: Small intestine and large intestine”

**OST 553 – Osteopathic Patient Care**

* None

**OMM 513 – Osteopathic Manipulative Medicine**

* None

## Semester 5

**OST 534 – Cardiovascular System**

* None

**OST 535 – Respiratory System**

* OST535 Respiratory System Laboratory Session
  + See also Dr. Kennedy’s lecture entitled “Respiratory System Histology”.

**OST 554 – Osteopathic Patient Care**

* None

**OMM 514 – Osteopathic Manipulative Medicine**

* None

## Semester 6

**OST 561 – Ambulatory Care Capstone**

* None

**OST 562 – Hospital Care Capstone**

* None

**OST 533 – Health System Science**

* None

**OST 555 – Osteopathic Patient Care**

* None

**OMM 515 – Osteopathic Manipulative Medicine**

* None