

Senior Surgical Anatomy Seminar Syllabus

Academic Year 2021 - 2022

Contact Information

Name	Position	Phone/Pager	email
Stephen J. Fenton, MD	Director	801-662-2989	stephen.fenton@hsc.utah.edu
David Morton, PhD	Co-Director	801-581-3385	david.morton@hsc.utah.edu
Dellene Stonehocker	Coordinator	801-581-4155	dellene.stonehocker@hsc.utah.edu

Course Information

Brief Description of Course

The Senior Surgical Anatomy Seminar will provide an environment, with didactic, practical, and hands on components, in which senior medical students who will be matriculating into a surgical specialty can learn surgical anatomy and its relevance to the treatment of disease processes commonly seen in general surgery.

Participating students will meet for two hours every two weeks with an attending surgeon from the Department of Surgery at the University of Utah School of Medicine. Faculty surgeons will spend one hour giving a clinically oriented lecture on a specific area of the body, i.e. foregut. These lectures will include surgical anatomy with its relevance to the surgical treatment of specific diseases, i.e. stomach anatomy and the treatment of peptic ulcer disease, esophageal anatomy and the treatment of achalasia, etc. Each lecture will include pertinent surgical procedures and how they relate to the anatomic area discussed. On a provided cadaver, the students will then have the following two weeks to perform dissections of the area discussed using surgical principles under direction of Dr. David Morton and his teaching assistants. For example, dissecting the inguinal anatomy much like a surgeon would do in performing an open inguinal hernia repair.

The other hour will be spent reviewing the dissections from the previous lecture along with Dr. Morton and the faculty surgeon. Dr. Morton and his assistants will have additional dissections that the surgeon and students can evaluate. The students will have a brief practicum on the previously assigned regions including an oral examination of the anatomy.

Clinical Course Goals - As a result of completing the Senior Surgical Anatomy Seminar:

1. Students will be able to recognize and identify the highlighted anatomic landmarks for each anatomic region discussed.
2. Students will be able to understand the principles of surgical technique in their approach to identifying and dissecting anatomic structures.
3. Students will be able to precisely dissect out each anatomic structure highlighted in the reviewed anatomic areas.

4. Students will be able to integrate the importance of anatomic knowledge of a specific structure with its clinical relevance in surgery.
5. Students will be able to comprehend surgical anatomy as it relates to the surgical treatment of different disease processes.

Clinical Course Format/Schedule

Timeline

Week 1 – Monday January 3, 2022

Hour 1 – Course Introduction

Hour 2 – The abdominal wall and inguinal anatomy

Recommended dissection highlights: layers of the abdominal wall, midline incision, subcostal incision, McBurney's/Rocky-Davis incision (RLQ), left lower quadrant hockey stick incision (i.e. for kidney transplant), pubic tubercle, anterior superior iliac spine, Inguinal ligament, Poupart's ligament, coopers ligament, internal ring, external ring, conjoint tendon, spermatic cord, cremaster muscle, vas deferens, testicular artery/vein, iliohypogastric nerve, ilioinguinal nerve, genitofemoral nerve, testicle.

Week 3 – TUESDAY January 18, 2022

Hour 1 – Practical review of the abdominal wall and inguinal anatomy

Hour 2 – The chest

Recommended dissection highlights: median sternotomy, thoracotomy, pericardial window, clamshell thoracotomy, posterior mediastinal structures (esophagus, trachea, aorta), azygous vein, phrenic and vagus nerves, lung anatomy (lobes, segments, pulmonary artery, pulmonary vein, bronchus), different approaches to thoracic vasculature, tube thoracostomy.

Week 5 – Monday January 31, 2022

Hour 1 – Practical review of the chest

Hour 2 – The stomach and duodenum

Recommended dissection highlights: intra-abdominal esophagus, phrenoesophageal membrane, crura, retroesophageal space, stomach, short gastric arteries, fundus mobilization, Kocher maneuver, duodenum, ligament of Treitz.

Week 7 – Tuesday February 15, 2022

Hour 1 – Practical review of the stomach and duodenum

Hour 2 – The gallbladder, liver, pancreas, and spleen

Recommended dissection highlights: gallbladder, porta hepatis, lesser sac, the foramen of Winslow, gastroduodenal artery, pancreas, superior mesenteric vein, superior mesenteric artery, portal vein, splenic vein, splenic artery, short gastric arteries, spleen, Mattox Maneuver (medial visceral rotation of the spleen and the pancreas), liver mobilization, basic liver anatomy (portal triad, retrohepatic inferior vena cava, triangular ligaments, suprahepatic vena cava, hepatic veins).

Week 9 – Monday February 28, 2022

Hour 1 – Practical review of the gallbladder, pancreas, and spleen

Hour 2 – The colon, rectum, and anus

Recommended dissection highlights: Cattell-Braasch maneuver (right colon and small bowel mesentery mobilization), ileocecal valve, appendix, cecum, ascending colon, ileocolic artery, right ureter, hepatic flexure, transverse colon, transverse mesentery, middle colic artery, splenic flexure, descending colon, sigmoid colon, inferior mesenteric artery and vein, left ureter, rectum, anus, dentate line, anal verge, anal sphincter complex, ischiorectal fossa.

Week 11 – Monday March 14, 2022

Hour 1 – Practical review of the small intestine and mesentery

Hour 2 – The small intestine and mesentery

Recommended dissection highlights: root of the mesentery, superior mesenteric artery, superior mesenteric vein, inferior mesenteric vein, mesenteric vascular arcade, jejunum, ileum, small bowel anastomosis (stapled/hand-sewn), roux-en-Y enteric limb, retrocolic windows.

Week 13 – Monday March 28, 2022

Hour 1 – Practical review of the colon, rectum, and anus.

Hour 2 – Basic anatomy of the neck and carotid artery

Recommended dissection highlights: anterior sternocleidomastoid incision, Common carotid artery, Internal carotid artery, external carotid artery, internal jugular vein, vagus nerve, hypoglossal nerve, low transverse neck incision, platysma, ventral strap muscles, thyroid gland, superior thyroid vascular pedicle, inferior thyroid vascular pedicle, parathyroid glands, recurrent laryngeal nerve, superior laryngeal nerve, trachea, esophagus.

Week 15 – Monday April 11, 2022

Hour 1 – Practical review of basic anatomy of the neck and carotid artery

Hour 2 – Peripheral vascular anatomy

Recommended dissection highlights: Axillary artery and vein, brachial artery, radial artery, femoral artery and vein, popliteal artery and veins, posterior tibial artery and veins, dorsal pedal artery and veins.

Week 17 – Monday April 25, 2022

Hour 1 – Practical review of major abdominal vascular anatomy

Hour 2 – Major abdominal vascular anatomy

Recommended dissection highlights: Suprarenal aorta (access and clamping), renal arteries, infrarenal aorta (access and clamping), common iliac arteries, hypogastric arteries, suprahepatic inferior vena cava, retrohepatic inferior vena cava, renal veins, infrarenal inferior vena cava, common iliac veins, hypogastric veins.

Week 19 – Monday May 2, 2022
Hour 1 - Final Practicum

Educational and Instructional Modalities

33% Didactic (including lecture, practicum, oral examination, and cadaver review)
67% Directed cadaveric dissection (performing dissections on provided cadavers)

Role of the Student in this Clinical Course

The student will attend the biweekly lectures provided by the visiting attending surgeon focusing on a specific anatomic area. It is anticipated that the student will come prepared having reviewed the corresponding chapter in the required textbook. With the help of Dr. Morton and his assistants, the student will then be responsible for performing the dissections of these areas on provided cadavers, making sure to cover the recommended dissection highlights. At the following lecture, they will demonstrate their understanding of the studied anatomic area through a brief practicum on the cadaver set up by Dr. Morton and his assistants, as well as an oral examination by the surgeon.

Required Textbook(s)/Readings (Choose one of the following)

Book Title + ISBN	Author/Publisher/Edition	Appx Cost
Surgical Anatomy and Technique: A Pocket Manual ISBN-10: 0387095144	Lee J. Skandalakis, John E. Skandalakis, Panajiotis N. Skandalakis Springer, 4 th Edition	\$50.00
Zollinger’s Atlas of Surgical Operations ISBN-10: 9780071797559	Robert M. Zollinger Jr., E. Christopher Ellison McGraw-Hill, 10 th edition	\$80.00

Additional Resources

Fischer’s Mastery of Surgery (Vol 1&2), ISBN-10- 1608317404, by Josef E. Fischer MD, Daniel B Jones MD MD, Frank B. Pomposelli MD, Gilbert R. Upchurch Jr. MD, Lippincott Williams & Wilkins. 3rd edition or later.

Netter’s Surgical Anatomy and Approachs, ISBN-10: 9781437708332, by Conor P. Delaney. Elsevier Saunders, 1st edition.

Atlas of Human Anatomy, ISBN-10: 1455704180, by Frank H. Netter, MD, Elsevier, 3rd edition or later.

Assessment and Grading

Preceptor Evaluations

All Clinical Courses employ a common preceptor evaluation form that instructs evaluators to select performance-based behaviors along multiple dimensions that best represent the student’s highest sustained performance during the preceptor’s period of observation.

Assessments

Assessment/Assignment	Weight towards Final Grade	Due Dates
Dissection and practical review of the abdominal wall and inguinal anatomy	9%	January 18, 2022
Dissection and practical review of the chest	9%	January 31, 2022
Dissection and practical review of the stomach and duodenum	9%	February 15, 2022
Dissection and practical review of the gallbladder, pancreas, and spleen	9%	February 28, 2022
Dissection and practical review of the small intestine and mesentery	9%	March 14, 2022
Dissection and practical review of the colon, rectum, and anus	9%	March 28, 2022
Dissection and practical review of the major abdominal vascular anatomy	9%	April 11, 2022
Dissection and practical review of the peripheral vascular anatomy	9%	April 25, 2022
Final Practicum	28%	May 2, 2022

Grading System & Remediation

You will receive a final letter grade of PASS (P) or FAIL (F).

PASS: A final numerical score of greater than or equal to 70%

FAIL: A final score of less than 70%

Seminar attendance of at least 80% of the sessions is required to obtain course credit. If a session is missed, credit for that session can be earned by reviewing the anatomy of the missed session with one of the course directors (Dr. Fenton or Dr. Morton) and giving a 10-minute presentation about a specific surgical procedure involving the missed anatomic area discussed. No more than 2 sessions can be missed to obtain credit for this course.

It is anticipated that the student will be enrolled in another course/rotation concurrently with this seminar. The schedule should be adjusted so they will be able to have the evening/night free on the day of the seminar and be able to attend. The student should have the other course/rotation director contact Dr. Fenton with any questions or concerns regarding scheduling.

Student Feedback

Student feedback is important and helps identify opportunities to improve the course

- At the conclusion of each course, clerkship or rotation medical students are required to complete a summative evaluation. Evaluations are completed electronically and remain confidential.
- Confidential On-The-Fly evaluations give students an opportunity to anonymously evaluate an instructor, learning activity or clinical experience in "real time." These evaluations are available on a secure UUSOM website (<https://students.medicine.utah.edu>) and are submitted to the Senior Director of Professionalism, Evaluation & Learning.

Standard Policies

Please refer to the Student Handbook (on the Student Affairs website) for these policies:

Accommodations
Attendance policy
Dress Code
Examination and Grading Policies
Grade or Score Appeal
Professionalism, Roles & Responsibilities
Mistreatment

Disability services

The School of Medicine seeks to provide equal access to its programs, services and activities for all medical students. The Center for Disability Services (CDS) provides accommodations and support for the educational development of medical students with disabilities.

Medical students with a documented disability are required to meet with the CDS Director for recommended accommodations. The CDS will work closely with eligible students and the Associate Dean of Professionalism, Accountability and Assessment to make arrangements for approved accommodations. The School of Medicine and CDS maintain a collegial, cooperative, and collaborative relationship to ensure compliance with federal and state regulations for students with disabilities.

Contact Robert Rainey (Robert.Rainey@hsc.utah.edu) for details

Or:

University of Utah Center for Disability Services
Olpin Student Union Building, Room 162
Phone (Voice/TDD): (801) 581-5020 Email: info@disability.utah.edu
<http://disability.utah.edu>