

# Course Syllabus

**Time:** 09/05/2018-12/14/2018; MWF; 1:30-6:00 pm

**Description:** Lectures, detailed laboratory dissections, and prosection demonstrations provide a thorough exploration of the gross anatomical structure and function of the human body. Fundamental principles of bioengineering are employed to promote analytical approaches to understanding the body's design. The embryology of major organ systems is presented, together with certain references to phylogenetic development, as a basis for comprehending anatomical complexity. Clinical lecture topics include the anatomical basis of abnormal anatomy, organ system research, and current challenges in surgery, radiology, and other medical fields where biotechnology plays an important role.

**Prerequisites:** Enrollment priority provided to HST students; others by permission. HST students register under HST.010, graded P/D/F. Lab fee. Enrollment restricted to graduate students.

**Faculty:** Lee Gehrke ([lgehrke@mit.edu](mailto:lgehrke@mit.edu)); Trudy Van Houten ([trudy\\_vanhouten@hms.harvard.edu](mailto:trudy_vanhouten@hms.harvard.edu)); Breda Zimkus ([bzimkus@oeb.harvard.edu](mailto:bzimkus@oeb.harvard.edu)); Mohini Lutchman ([mohini\\_lutchman@hms.harvard.edu](mailto:mohini_lutchman@hms.harvard.edu)); Sabine Hildebrandt ([sabine.hildebrandt@childrens.harvard.edu](mailto:sabine.hildebrandt@childrens.harvard.edu)); Katelyn Burkhart (TA) ([katelynb@mit.edu](mailto:katelynb@mit.edu))

## Course Summary:

Date	Details	
Wed Sep 5, 2018	<a href="#">Course Introduction (Gehrke)</a>	1:30pm to 2pm
	<a href="#">Lab Table Assignments</a>	2:15pm to 2:45pm
	<a href="#">History and Ethics of Anatomy (Hildebrandt)</a>	3pm to 3:45pm
	<a href="#">Intro. to Laboratory (Gehrke)</a>	4pm to 4:30pm
Fri Sep 7, 2018	<a href="#">Anatomy of Thorax (Zimkus)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Chest Wall: Tank, 16th edition: LAB 1-4 (read in advance); 73-75 (at skeleton); 29 (Dissection instructions 1-11); 31-34 (pectoral region); 75-76; Tank, 15th edition: LAB 1-4; 63,64 (at skeleton); 21-22 (Instructions 1-11); 26 (pectoral)-30</a>	2:45pm to 6pm

Date	Details	
	<a href="#">PRO (Zimkus): Superficial Anterior Thoracic Wall (half class)</a>	3:15pm to 6pm
Mon Sep 10, 2018	<a href="#">Introduction to Peripheral Nerves (Gehrke)</a>	1:30pm to 2:30pm
	<a href="#">Radiology: Breast &amp; Chest Imaging (Slanetz)</a>	2:30pm to 3:30pm
	<a href="#">LAB: Removal of anterior chest wall; Lungs: 16th: 77 (removal of anterior thoracic wall; pleural cavities) - 83 (mediastinum); 15th: 15th: 66 (removal of anterior thoracic wall) - 72 (mediastinum)</a>	3:30pm to 6pm
	<a href="#">PRO (Zimkus): Superficial Anterior Thoracic Wall (half class)</a>	3:30pm to 6pm
Wed Sep 12, 2018	<a href="#">Heart Anatomy : Bovine Heart in-lecture Prosection</a>	1:30pm to 2:30pm
	<a href="#">LAB: Anterior Mediastinum and Middle Mediastinum: 15th: 72-82 (to superior mediastinum); 16th: 83-93 (to superior mediastinum)</a>	2:45pm to 6pm
Fri Sep 14, 2018	<a href="#">Organogenesis and Heart Development (Gehrke)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Superior Mediastinum and Posterior Mediastinum: 15th: 82-87; 16th: 93-98</a>	2:45pm to 6pm
	<a href="#">PRO (Hildebrandt): Posterior Mediastinum</a>	3pm to 6pm
Mon Sep 17, 2018	<a href="#">Radiology: Intro to Top 25 Cases (Slanetz)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Superficial Back: 15th: 5-9 (stop at superficial muscles); 16th: 5-10 (stop at superficial muscles)</a>	2:45pm to 6pm
Wed Sep 19, 2018	<a href="#">Biomechanics of Carrying (Yegian)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Back Musculature: 15th: 9-15 (vertebral canal); 16th: 10-17</a>	2:45pm to 6pm
Fri Sep 21, 2018	<a href="#">Spinal Cord and Disc Defects (Gehrke, Lutchman, Burkhart)</a>	1:30pm to 2:30pm

Date	Details	
	<a href="#">LAB: Vertebral Canal, Spinal Cord, Scapular Region: 15th: 15-19; 24 (scapular region) - 26 (pectoral region); 16th:18-22; 23-27 (Note: Posterior Compartment of the Arm included)</a>	2:45pm to 6pm
	<a href="#">PRO (Lutchman): Vertebral Column and Spinal Cord</a>	2:45pm to 6pm
Mon Sep 24, 2018	<a href="#">Organization of Upper Extremity (Van Houten)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Upper Extremity and Brachial Plexus: 15th: 21-24; 30 (axilla) - 34 (arm and cubital fossa); 16th: 28-31 (pectoral region); 35 (axilla)-39 (arm)</a>	2:45pm to 6pm
	<a href="#">PRO (Hildebrandt): Shoulder and Brachial Plexus</a>	3pm to 6pm
Wed Sep 26, 2018	<a href="#">Development of the Extremities (Zimkus)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Arm and Forearm Flexors: 15th: 34-46 (palm of the hand); 16th: 39-51 (palm of the hand)</a>	2:45pm to 6pm
	<a href="#">PRO (Lutchman): (Arm, Forearm Flexors)</a>	2:45pm to 6pm
Fri Sep 28, 2018	<a href="#">Func. Anatomy Hand (Van Houten)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Palm of the Hand: 15th: 46-53 (extensor region); 16th: 52-59 (extensor region)</a>	2:45pm to 6pm
	<a href="#">PRO (van Houten): Palm of Hand</a>	2:45pm to 6pm
Mon Oct 1, 2018	<a href="#">Hand Surgery; Brachial Plexus Injury Management (Vuillermin)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Extensor Surfaces; Joints of Upper Extremity: 15th: 53-62; 16th: 59-71</a>	2:45pm to 6pm
	<a href="#">PRO (Van Houten): Arm, Forearm Extensors; Joints of Upper Extremity</a>	2:45pm to 6pm
Wed Oct 3, 2018	<a href="#">Organization of Lower Extremity (Van Houten)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Lower Extremity; Superficial &amp; Anterior Thigh: 15th: 165-176; 16th: 183-196</a>	2:45pm to 6pm

Date	Details	
	<a href="#">PRO (Lutchman): Anterior &amp; Medial Thigh</a>	2:45pm to 6pm
Fri Oct 5, 2018	<a href="#">Surgical Anatomy of Shoulder and Upper Extremity: Physical Exam of Upper Extremity (Price)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Gluteal Region; Posterior Thigh: 15th: 176-184 (leg and dorsum of foot); 16th: 197-205 (posterior compartment of the leg)</a>	2:45pm to 6pm
	<a href="#">PRO (Hildebrandt): Gluteal Region; Hamstrings; Popliteal Fossa</a>	2:45pm to 6pm
Mon Oct 8, 2018	<a href="#">Columbus Day (regional holiday)</a>	12am to Oct 9 at 12am
Wed Oct 10, 2018	<a href="#">Sports Medicine (Price)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Leg: 15th: 184-193; 16th: 205-216 (sole of the foot)</a>	2:45pm to 6pm
	<a href="#">PRO (Lutchman): Leg (all compartments); Dorsum and Sole of Foot</a>	3pm to 6pm
Fri Oct 12, 2018	<a href="#">Radiology: Reading MSK images (Wu)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Sole of Foot; Joints of Lower extremity: 15th: 193-203; 16th: 216-227</a>	2:45pm to 6pm
	<a href="#">Self-Directed Knee Prosection</a>	2:45pm to 5:45pm
	<a href="#">Radiology: Small Group MSK Radiology (Hochman, Wu, Slanetz)</a>	2:45pm to 5:15pm
Mon Oct 15, 2018	<a href="#">Review extremities (Van Houten)</a>	12:30pm to 1:30pm
	<a href="#">Radiology: Review Top 25 Chest/MSK Images (Slanetz)</a>	1:30pm to 2:30pm
	<a href="#">Review Thorax and Development (Zimkus)</a>	2:30pm to 3:30pm
	<a href="#">Review Organogenesis/Heart Development</a>	3:30pm to 4:30pm
	<a href="#">Practice Slide Identifications (Gehrke)</a>	4:30pm to 5pm

Date	Details	
Wed Oct 17, 2018	<a href="#">Mohini Spinal Anatomy Review</a>	5pm to 5:30pm
	<a href="#">Mid-term examination</a>	1:30pm to 3pm
Fri Oct 19, 2018	<a href="#">Development of GI System (Gehrke)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Abdominal wall; inguinal region: 15th: 89-98 (reflection of the abdominal wall); 16th: 99-110 (reflection of the abdominal wall)</a>	2:45pm to 6pm
Mon Oct 22, 2018	<a href="#">GI Endoscopy (Dr. Steven Lin)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Peritoneum; Peritoneal cavity: 15th: 98-107 (SMA); 16th: 110-122 (SMA)</a>	2:45pm to 6pm
Wed Oct 24, 2018	<a href="#">Radiology: Abdominal Imaging (Dr. Slanetz &amp; Colleagues); Pediatric Anomalies</a>	1:30pm to 2:30pm
	<a href="#">LAB: Mesenteric Vessels; Abdominal viscera: 15th: 107-116 (posterior abdominal viscera); 16th: 122-131 (posterior abdominal viscera)</a>	2:45pm to 6pm
	<a href="#">PRO (Zimkus): Abdominal Viscera, Celiac Axis, Mesenteric Vessels, Portal Vein; Posterior Abdominal Wall</a>	2:45pm to 6pm
Fri Oct 26, 2018	<a href="#">Development of UG System (Zimkus)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Posterior abdominal viscera; inferior diaphragm: 15th: 116-124; 16th: 131-140</a>	2:45pm to 6pm
Mon Oct 29, 2018	<a href="#">Organization of Pelvis and Perineum (Hildebrandt)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Pelvis &amp; Perineum Part 1: 15th: 125-129 or 16th: 141-145 read outside of class. We will not dissect the anal triangle/ ischiorectal fossa (pp 127-129); that will be covered in the model building exercise; See details below for male/female dissec</a>	2:30pm to 5:45pm
	<a href="#">PRO (Hildebrandt): Pelvis &amp; Perineum</a>	2:45pm to 6pm

<b>Date</b>	<b>Details</b>	
Wed Oct 31, 2018	<a href="#">Pelvis Model Building with BI OB-Gyn Faculty</a>	1:30pm to 5:30pm
Fri Nov 2, 2018	<a href="#">Radiology: Top 25 Abdo/Pelvis Cases</a>	1:30pm to 2:30pm
	<a href="#">LAB: Pelvis and Perineum Part 2: 15th: Male: 140 (urinary bladder) - 147 (female ext. genitalia); 15th: Female: 157 (urinary bladder) - 163; 16th: Male: 158 (urinary bladder) - 165 (female ext. genitalia); 16th: Female: 175 (urinary bladder) - 182</a>	2:30pm to 5:30pm
	<a href="#">Radiology: Small Group Radiology (Gee, others TBD, Slanetz)</a>	2:30pm to 5pm
Mon Nov 5, 2018	<a href="#">Otolaryngology</a>	1:30pm to 2:30pm
	<a href="#">LAB: Face, Scalp: 15th: 218 (head)-226 (parotid region); 228 (scalp)-229; 16th: 244 (head)-252 (parotid region); 254 (scalp)-256 (temporal region)</a>	2:45pm to 5:30pm
	<a href="#">PRO (Van Houten): Face</a>	2:45pm to 5:30pm
Wed Nov 7, 2018	<a href="#">Distribute Skulls</a>	1pm to 1:30pm
	<a href="#">Cranial Cavity (Gehrke)</a>	1:30pm to 2:15pm
	<a href="#">Intro to Cranial Nerves (Van Houten)</a>	2:15pm to 2:45pm
	<a href="#">LAB: Interior of skull; meninges; cranial nerves: 15th: 235-245 (orbit); 16th: 263-275</a>	2:45pm to 6pm
Fri Nov 9, 2018	<a href="#">Organization of the Neck (Van Houten)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Triangles of the neck: 15th: 205-215 (end at "thyroid and parathyroids"); 16th: 229-239</a>	2:45pm to 6pm
	<a href="#">PRO (Van Houten): Neck Triangles; Cerv. Viscera</a>	2:45pm to 6pm
Mon Nov 12, 2018	<a href="#">Veteran's Day (observed)</a>	1am to Nov 13 at 12am
Wed Nov 14, 2018	<a href="#">Eye &amp; Orbit (Lutchman)</a>	1:30pm to 2:30pm

<b>Date</b>	<b>Details</b>	
	<a href="#"><u>LAB: Eye and Orbit: 15th: 245- 252; 16th: 276-283 (disarticulation of the head)</u></a>	2:45pm to 6pm
	<a href="#"><u>PRO: Fresh Bovine Eye (self-directed)</u></a>	2:45pm to 6pm
	<a href="#"><u>Interim Review: Gut Development (Gehrke) and Urogenital Development (Zimkus)</u></a>	1:30pm to 2:30pm
Fri Nov 16, 2018	<a href="#"><u>LAB: Thyroid region; parotid region: 15th: 215-218 (head); 226-228 (scalp); 16th: 240-244 (head); 252- 254 (scalp)</u></a>	2:30pm to 6pm
	<a href="#"><u>Anatomy-Pathology Correlation with Drs. Mitchell and Padera</u></a>	3pm to 6pm
	<a href="#"><u>Radiology: Intro to Head/Neck Imaging (Dr. Elisa Flower)</u></a>	1:30pm to 2:30pm
Mon Nov 19, 2018	<a href="#"><u>Development of Head and Neck (Stankovic)</u></a>	2:30pm to 3:30pm
	<a href="#"><u>LAB: Temporal Region; infratemporal fossa: 15th: 230-235; 16th: 256-262</u></a>	3:30pm to 6pm
	<a href="#"><u>PRO (Hildebrandt): Infratemporal Region; PT Fossa</u></a>	3:30pm to 6pm
Wed Nov 21, 2018	<a href="#"><u>Thanksgiving Break: No Class</u></a>	
Fri Nov 23, 2018	<a href="#"><u>Thanksgiving Break: No Class</u></a>	
	<a href="#"><u>Swallowing and Mastication (Bhatt)</u></a>	1:30pm to 2:30pm
Mon Nov 26, 2018	<a href="#"><u>Review: Pelvis (Hildebrandt) &amp; Org. Neck (van Houten)</u></a>	2:30pm to 3:30pm
	<a href="#"><u>LAB: Disarticulation of Head: 15th: 252-259 (nose and nasal cavity); 16th: 283-290 (nose and nasal cavity)</u></a>	3:30pm to 6pm
	<a href="#"><u>Clinical Anatomy of the Oral Cavity (Abdul-Aziz)</u></a>	1:30pm to 2:30pm
Wed Nov 28, 2018	<a href="#"><u>LAB: Nasal cavities and palate: 15th: 259-268; 16th: 290-299</u></a>	2:45pm to 6pm
	<a href="#"><u>PRO (Lutchman): Bisected Head, Palate, Pharynx</u></a>	2:45pm to 6pm

Date	Details	
Fri Nov 30, 2018	<a href="#">Larynx (Kobler)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Oral region and larynx: 15th: 268-274 (ear); 16th: 300-307 (ear)</a>	2:40pm to 6pm
	<a href="#">PRO: Fresh Bovine Larynx (Supplementary Instructions)</a>	2:45pm to 6pm
Mon Dec 3, 2018	<a href="#">Review: Eye &amp; Orbit (Lutchman) &amp; Abdominal/Pelvic Vasculature (Zimkus)</a>	12:30pm to 1:15pm
	<a href="#">Middle Ear and Inner Ear; Parasympathetic Ganglia (Gehrke / Van Houten)</a>	1:30pm to 2:30pm
	<a href="#">LAB: Middle and inner ear: 15th: 274-278; 16th: 307-312</a>	2:45pm to 6pm
	<a href="#">PRO (Hildebrandt and Lutchman): Temporal Bone Prosection</a>	2:45pm to 5:45pm
Wed Dec 5, 2018	<a href="#">Face Transplantation Surgery (Pomahac)</a>	1:30pm to 2:30pm
	<a href="#">Radiology: Top 25 Radiology Jeopardy (Slanetz and Gee)</a>	2:45pm to 4:30pm
	<a href="#">Anatomy Memorial Service</a>	5:15pm to 6:45pm
Fri Dec 7, 2018	<a href="#">Anatomical Review of Cranial Nerves (Van Houten)</a>	1:30pm to 2:15pm
	<a href="#">Clinical Cranial Nerve Review (Gonzalez-Castro)</a>	2:30pm to 4pm
	<a href="#">Review of Head/Neck Development (Zimkus) and Practice Identifications (Gehrke)</a>	4:15pm to 5:15pm
Fri Dec 14, 2018	<a href="#">Anatomy Final Exam</a>	9am to 12pm
	<a href="#">Celebration</a>	12pm to 2pm