STRUCTURE OF THE HUMAN BODY 2019-2020 COURSE INFORMATION

CONTENTS

Page

1. Course Overview 1
2. Methods of Instruction 2-3
3. Attendance and Absences 3-4
4. Important Dates 4
5. Text Books 5
6. Quizzes and Exams 5-7
7. Review Sessions 7
8. Grading 7-8
9. Remediation 8-9
10. Introduction to the Laboratory 9-12
11. Contact Information 13

1. COURSE OVERVIEW

The central goal of the Structure of the Human Body course is to provide students with a firm understanding of the general anatomy and development of the human body, including the osteology, musculature, circulatory system, viscera, and the human nervous system, including the cortex, brainstem, cerebellum, deep brain structures, spinal cord, peripheral nerves, sensory systems, motor systems, and the autonomic nervous system. This will be achieved through demonstrations using prosected cadavers, student dissection, anatomical models, plastinated specimens, online learning modules (SoftChalk, Camtasia, etc.), QR code self-guided learning, labeled gross specimens and models, medical imaging, lecture, guided review sessions, and self-directed learning. Our course specific goals and objectives can be found on the SHB Homepage under Course/Clerkship Information or at http://www.stritch.luc.edu/lumen/meded/grossanatomy/homepage/goals_objectives.pdf.

2. METHODS OF INSTRUCTION:

A. Lectures

Most lectures will last 50 minutes; some shorter or longer depending on the faculty member. For some lectures, a short video will be provided online. These videos represent a condensed version of the corresponding lecture and may prove useful when viewed ahead of time. In the lecture, students will be challenged to answer 4 or more "boards-like" questions. The correct and incorrect answers to these questions will be discussed. The approach to covering these questions may vary between lecturers. Some may use an audience response system; some may pit students against each other in a "game-like" setting. Thus, adequate background preparation by the student is necessary in order to benefit from lectures.

A textbook is recommended for reference for more detailed personal research, although a student can excel in the course by attending the lectures/lecture videos, using the LUMEN teaching aides, attending labs, and studying the PowerPoint presentations.

Clinical correlation lectures illustrate the clinical applications of gross anatomy and will not be recorded. Most other lectures are recorded and can be viewed on LUMEN.

B. Laboratory Sessions

Anatomy is a visual and practical discipline, and therefore relies heavily on the laboratory as a learning forum. Please remember that a rewarding experience for the student of gross anatomy is largely dependent upon the wisdom, foresight and social conscience of those who donate their bodies for research and education after death. Make the most of this unique and important learning experience.

1. Students will rotate through each lab in groups of 14-15 students. Each group will spend 40 minutes on a prosected cadaver with one of three instructors, reviewing the Should-Find List. One group per rotation will attend lab in 190 [See details below in section 10]. ***Attendance in the laboratory is mandatory, and attendance will be taken daily.*** [See section 3. *Attendance and Absences* for more details]. Violation of laboratory rotation protocol may also result in a “Professionalism” ding.

2. Students will be assigned to a ***dissection group*** (subset of your lab group). Each group will be assigned to dissect a particular region of the body on a specific student dissection cadaver. The region assigned will be a relevant dissection for the next exam. Dissection is a self-directed experience, and students within a group must work out amongst themselves when to dissect (the laboratory is open 24 hours). Prior to the exam, all students in an assigned dissection group will be given a brief fill-in the-blank quiz on the structures that should have been dissected and identified on their cadaver. While we will not be grading the quality of the dissection, care must be taken during dissection to avoid damaging the structures that need to

be identified. A laboratory dissection guide will be available for the specific areas to be dissected, and the structures to be identified will come from the laboratory "Should Find" list.

C. Independent Learning, Computer-Based Instruction and other Learning Resources:

The Loyola University Medical Education Network (LUMEN) is designed to promote the use of multimedia in the integration of the basic and clinical sciences. A variety of other teaching aids are available, including:

- Dissection Videos - those found in LUMEN.
- Skeletal material - available for study in the Gross Anatomy Laboratory room.
- Epoxy-embedded sectioned human cadaver - on display in the LL hallway.
- Gross anatomy models - these are to be studied in the laboratory by individuals or in small groups, outside of class time. The library also has an extensive collection of models which can be checked out (requests can be made at the front desk).
- Prosected cadavers - available in lab.
- Cadavers available for dissection and review - available in lab.
- Models and specimens labeled with QR codes – available in the lab; use own mobile device with QR reader.
- SoftChalk, self-assisted modules (SAMS) – available on the SHB LUMEN homepage.

3. ATTENDANCE AND ABSENCES

Attendance and participation in lecture is expected. ***Laboratory attendance is mandatory, and attendance will be taken daily.*** Students must attend lab with their assigned lab group, during their scheduled lab time. Students are not permitted to change groups or attend another lab time other than that which they are scheduled to attend.

Unexcused absences will result in a mark for "Concern" within the "Professionalism" Competency Assessment of the student grade, **and will result in the loss of 1 point per missed lab from the student's final grade.** Violation of laboratory rotation protocol may also result in a "Professionalism" ding. If you will be absent for a lab session, you must email the Course Director and copy the Course Coordinator in advance of the session, as well as follow the protocol listed in the Academic Policy Manual:

Per the Academic Policy Manual:

Unexpected/Emergency Absences from Required Activities: *Examinations or other required academic activities missed due to illness or other legitimate, serious, extenuating reasons may be made up only if the Course Director and Associate Dean for Student Affairs or designate have received notice*

of the absence, in advance if non-emergent or as soon as possible if emergent, and granted permission for an excused absence. Absence due to illness requires written documentation from the Student Health Service submitted to the Office of Student Affairs.

Non-Emergent Absences from Required Activities: *Petitions for approved absences for serious but non-emergent reasons from activities in which attendance is mandatory (i.e., examinations) must be submitted in writing to the Assistant Director of Student Affairs, Course Director, and Course Coordinator, at least thirty days prior to the start of the event for which the Loyola University Chicago Stritch School of Medicine Academic Policy Manual Page 36 of 60 absence is requested. A student must have a serious reason for an excused absence or request for a change in an exam date. The petition should detail the nature of the conflict and available supporting documentation should be attached (e.g., copy of a jury summons or invitation to present a poster). A petition for permission to be absent is a request, requires review, and is not automatically approved simply by submission. In granting permission, the logistics and feasibility of rescheduling the missed academic activity are weighed and the student is notified of the decision. Approval to reschedule an examination specifies a date later than the original test date on which the test must be taken. An examination cannot be rescheduled to a date earlier than the original exam date. Non-emergency absences not requested at least thirty days in advance of the event may not be able to be accommodated and may be denied.*

Students who are ill or have other extenuating circumstances (i.e. death in the family) prior to or on a scheduled quiz or exam day must contact the Dean of Student Affairs and the Course Director prior to the exam to obtain an excused absence. Excused absences are granted according to University policy, proper documentation will be required, and no exceptions will be made. You must also notify the Course Coordinator, so that alternative arrangements can be made.

4. IMPORTANT DATES

Sept. 23: Opening Blessing Ceremony (Required)
Sept. 24: First Day of SHB lectures & lab
Oct. 4: Quiz 1
Oct. 14: Dissection Completion & Quiz Deadline – Lab Groups 1-4
Oct. 15: **Exam 1**
Oct. 28: Quiz 2
Oct. 31: Dissection Completion & Quiz Deadline – Lab Groups 5-8
Nov. 4: **Exam 2**
Nov. 15: Quiz 3
Nov. 19: Dissection Completion & Quiz Deadline – Lab Groups 9-12
Nov. 21: **Exam 3**
Dec. 2: Closing Blessing Ceremony (Required)
Dec. 13: Quiz 4 (Neuro)
Dec. 19: **Exam 4** (Neuro)

5. TEXT BOOKS:

Most texts are available electronically via the Health Sciences Library website.

RECOMMENDED TEXTS:

Pansky, B. and Gest, T. (2011). ***Lippincott's Concise Illustrated Anatomy: Back, Upper Limb and Lower Limb***. 1st Ed. Lippincott, Williams & Wilkins. ISBN 978-160313839.

Pansky, B. and Gest, T. (2011). ***Lippincott's Concise Illustrated Anatomy: Thorax, Abdomen and Pelvis***. 1st ed. Lippincott, Williams & Wilkins. ISBN 978-1609130282.

Pansky, B. and Gest, T. (2013). ***Lippincott's Concise Illustrated Anatomy: Head and Neck***. 3rd ed. Lippincott, Williams & Wilkins. ISBN 978-1609130275.

Netter, F.R. (2019). ***Atlas of Human Anatomy***, 7th ed. Saunders. ISBN 978-0323393225.

Mtui, E., Gruener, G, and Dockery, P. (2015). ***Fitzgerald's Clinical Neuroanatomy and Neuroscience***, 7th ed. Elsevier. ISBN 9780702058325.

Sadler, T. W. (2014). ***Langman's Medical Embryology***, 13th **ed.** Lippincott Williams & Wilkins. ISBN 978-1451113420.

Dudek, R. (2013). ***High-Yield Embryology***, 5th ed. Lippincott Williams & Wilkins. ISBN 978-1451176100. (Not available via the Health Science Library)

Cochard, L.R., *et al.* (2011). ***Netter's Introduction to Imaging***, 1st ed. Saunders. ISBN 978-1451191646.

Stenhouse, L. (2012). ***Crash Course Anatomy***, 4th ed. Mosby. ISBN 978-0723436218.

RECOMMENDED FLASHCARDS:

Hansen, J.T. (2014). ***Netter's Anatomy Flash Cards***, 4th ed., Saunders. ISBN 978-0323185950. [Cards] (Not available via the Health Science Library)

6. QUIZZES AND EXAMS

A. Quizzes

Four 30-question multiple-choice quizzes will be given (15 points each). Quizzes 1-3 will deal solely with muscle–nerve relationships of the upper and lower extremity, some rudimentary embryology and five practical-style questions. The fourth quiz will consist of 30

questions on brain anatomy. All quizzes will be administered in the Sit-Down Labs. Students should treat quizzes as exam and are expect to sign-in and follow the given instructions by the quiz proctors.

Each laboratory dissection team will be given a short fill-in-the-blank quiz (5 questions) on the cadaver they dissected. Questions will consist of identifying a structure pointed to by the instructor.

B. Written/Laboratory Exams

The four written exams will consist of 100 questions each. Seventy multiple-choice type questions will be, in part, following formats suggested by the USMLE Board of Examiners, along with 30 practical style identification questions. Exams are completed in an online format and will also contain practical images, radiological images, cross-sectional images, drawings, and other visuals. Exam 4 will focus on neuroanatomy. The following are examples of typical gross anatomy written exam questions:

Example using a clinical scenario:

1. A man pushes a piano across the floor. At the wrist, the force is transmitted from the carpal bones to the radius. At the elbow, the force is transmitted from the ulna to the humerus. Which one of the following structures transmits the force from the radius to the ulna?

A. annular ligament
B. bicipital aponeurosis
C. flexor retinaculum
D. intermuscular septum
E. interosseous membrane

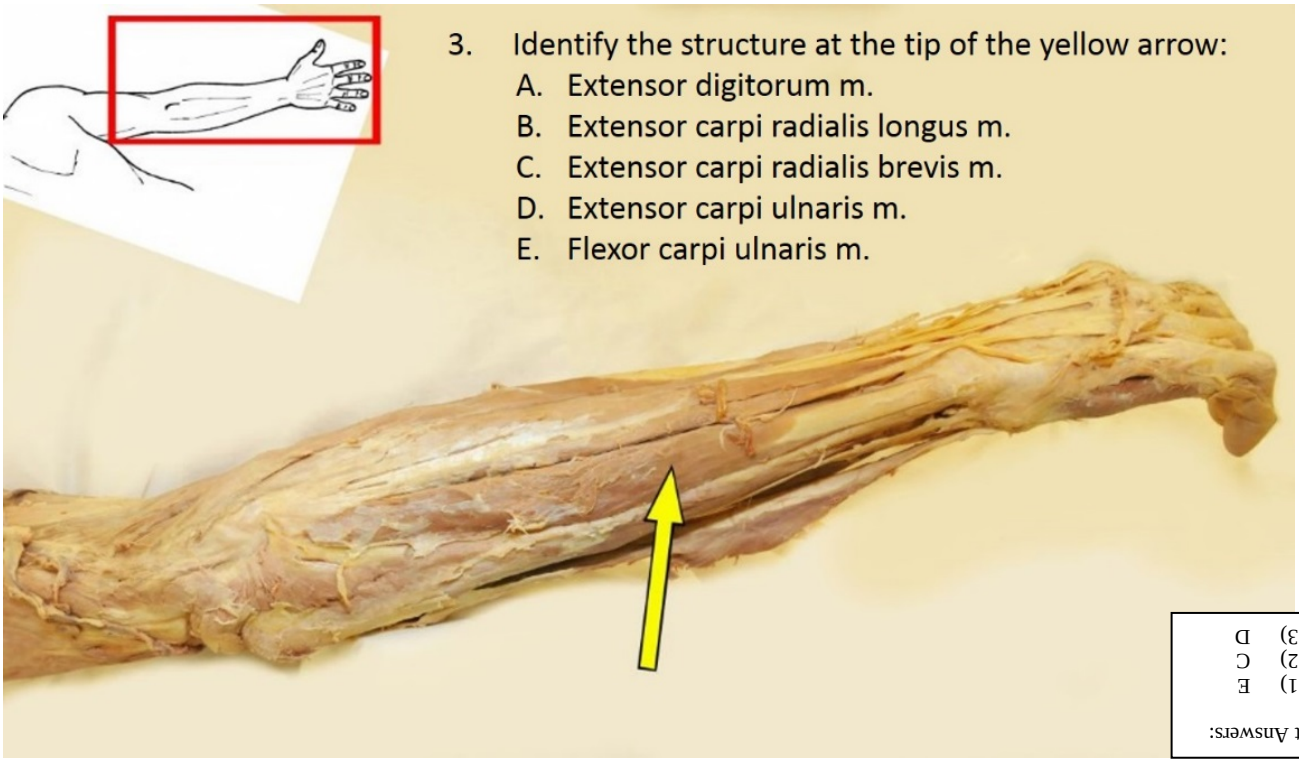
Example of a simple anatomy question:

2. The cords of the brachial plexus are named for their position relative to which structure?

A. brachial artery
B. axillary vein
C. axillary artery
D. Subclavian artery
E. pectoralis minor muscle

Thirty identification (practical-style) questions will be included in each exam. These will consist of an image plus five answer choices:

Example of a digital practical question:



Correct Answers:
1) E
2) C
3) D

C. Academic Honesty

Per the Academic Policy Manual, students must practice academic honesty in all examinations and quizzes. Students who do not follow this practice will be reported to Student Affairs for further review which may lead to dismissal.

7. REVIEW SESSIONS

At the end of each week, faculty will hold a scheduled review to discuss the past week's lectures and labs. It is highly recommended that students take advantage of this learning opportunity and attend these sessions.

8. GRADING

The final course grade will be based on your assessment of the Medical Knowledge and Professionalism competencies. The graded components are the four exams and four quizzes (less any penalties for lab absences), along with a fill-in-the-blank lab quiz. The maximum number of points possible in the course will be 465, and will be broken down as follows:

Component	Written	Digital Practical	Lab Quiz	Total
Quiz 1	12.5	2.5	-	**15**
Exam 1	70	30	-	**100**
Quiz 2	12.5	2.5	-	**15**
Exam 2	70	30	-	**100**
Quiz 3	12.5	2.5	-	**15**
Exam 3	70	30	-	**100**
Quiz 4 (Neuro)	-	15	-	**15**
Exam 4 (Neuro)	70	30	-	**100**
Lab Quiz	-	-	5	**5**
Total:	**325**	**135**	**5**	**465**

Final Grades:
Final grades are pass/fail based on cumulative quiz and exam performance.

Grade	Points Earned (465 possible)
Pass (70.0% and above)	**325.5 - 465**
Fail (< 70.0%)	**Below 325.5**

There are 465 possible points in SHB. Each "point" has the same weight/value. **There will be no "rounding" of grades** (e.g. 325 points, 69.89%, is a failure).

9. REMEDIATION

Students who fail to achieve the minimum score required for a passing grade in the course **may** be allowed the opportunity to take a make-up remediation exam. The make-up exam will be prepared by the course director in collaboration with the Associate Dean for Medical Education and will be a rigorous, yet fair assessment to ensure that the student has achieved sufficient mastery of the course content to be allowed to continue to the next academic level. Remediation exams will be administered at the end of the academic year and will be scheduled by the Office of Student Affairs and the Academic Center for Excellence in consultation with the Course Director. All students requiring remediation should meet with the Course Director well in advance of the scheduled date of the exam to discuss both the exact format of the exam and their proposed study approach. The exam will consist of a comprehensive, 100-question written

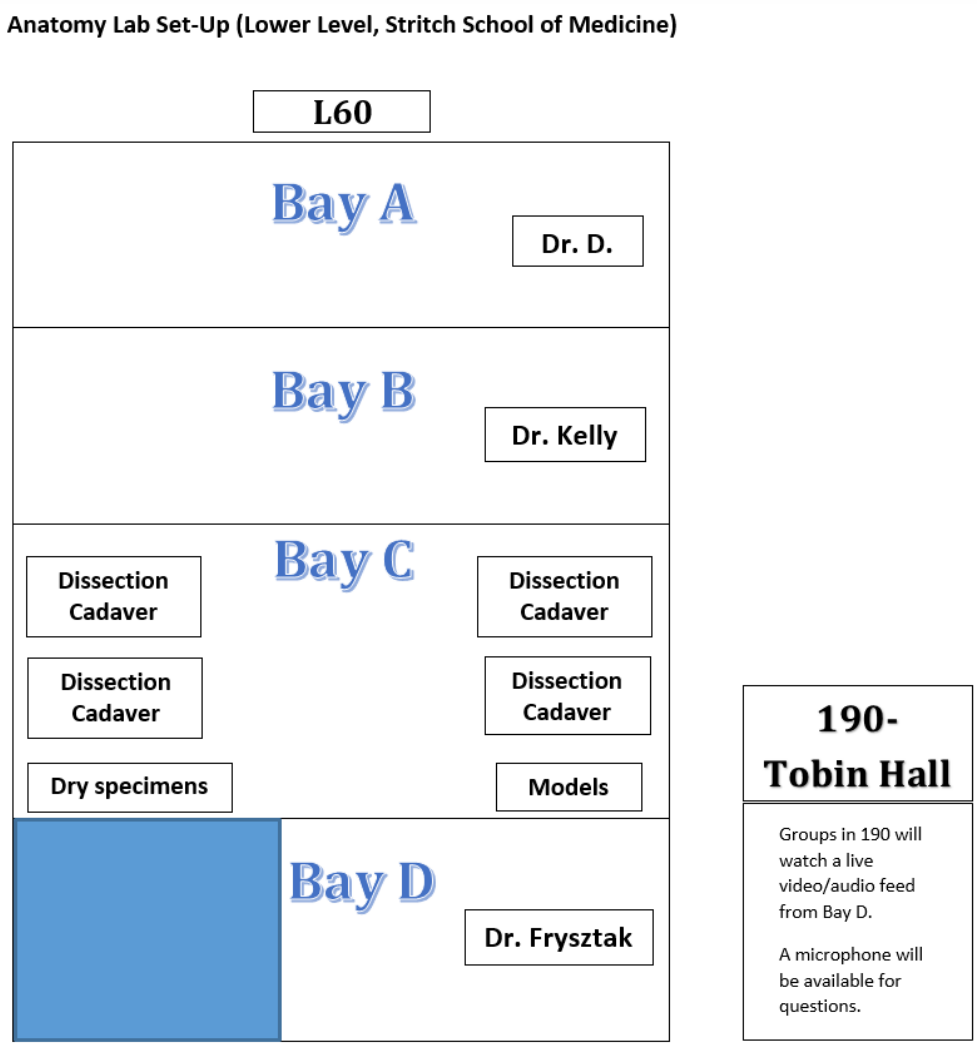
examination. Those students achieving a score of greater or equal to **75%** on the remediation exam will have their F grade converted to a P*. Students who fail to successfully achieve the minimum passing score will receive a failing grade and be required either to repeat the course in its entirety, or alternatively, may be subject to automatic administrative action by the School, as outlined in the Academic Policy.

Please note that students with a final cumulative course score of <60% may be denied the opportunity to remediate their failure by an end-of-year exam, and may instead be required to repeat the course. The decision to allow such students the opportunity to take a remediation exam will be made by the Student Promotions Committee following a recommendation provided by the Course Director.

10. INTRODUCTION TO THE LABORATORY

As mentioned above (Section II. Methods of Instruction), students will rotate through three faculty members with their assigned lab group of 14-15 students. Three of the lab sessions will be held in the gross anatomy lab, where each group will spend 40 minutes on a prosected cadaver with a faculty member reviewing the necessary structures (as listed in the Should-Find List) from the previous day's lecture(s). The fourth group will be assigned to 190, where the audio and video from Bay D will be projected to the screen. Students in 190 will have the ability to both ask and answer questions through two-way communication between Bay D and 190. It is recommended that each student print the Should-Find List and bring it to the lab to take notes on. Please note each group's lab time will change every 3 labs. Students should regularly check the SHB homepage for the lab schedule and group assignments.

A. LAB SET-UP: The lab will be set up in the Lower Level of the Stritch School of Medicine (Cuneo Bldg), Room L60, Bays A-D. One group/rotation will view the lab from 190.



B. LAB REGULATIONS:

1) Students are provided with gloves, scalpel blades, lab coats, atlases and other dissection tools for use in the lab. Lab coats are slightly used and donated from various departments around campus. There will be a scheduled day for students to pick-out a lab coat; students will be contacted via email once the date is scheduled.

2) Unauthorized personnel are not allowed in the laboratory without the permission of the Course Director. Authorized persons include faculty of SSOM, residents, graduate students, and medical students currently enrolled in or assisting with the course, the staff associated with the course, and maintenance personnel.

3) Visiting student groups from high schools and other educational institutions are permitted entry after class hours only when accompanied by their school advisor and a faculty or staff member approved by the Course Director.

4) Members of the SSOM Committee on Admissions and office staff may accompany applicants to view formal dissection periods during class hours.

5) When you have finished working on or studying from a cadaver, **please ensure that the dissected region is damp and the cadaver is fully covered.**

6) **No cameras are allowed** in the laboratory without permission from the Course Director.

7) No cadaver tissue, skeletal material, electric and non-electric dissection tools, or cadaver wraps may be taken from the laboratory at any time.

8) Smoking, eating, and drinking are not permitted in the laboratory.

9) At all times, a respectful attitude must be maintained toward the cadavers, which have been donated for your benefit.

10) Students are required to maintain the laboratory in a clean, orderly condition. Do not leave paper towels or other trash on the floors or tables. Return tools to the appropriate cupboard drawers. Place used scalpel blades in the red safety containers labeled for this purpose. Compliance for maintaining a clean and orderly lab environment is a component of the Professionalism competency goal for SHB and SSOM.

11) All fluid must be drained from the dissecting table as it accumulates. Please wipe up any spills on the floor immediately, as fluids make the floor hazardous. Transfer excess fluid into the waste collection drum in Bay B.

12) All exposed skin must be covered during dissection. Garments worn in the laboratory must be washed at frequent intervals. Shoes worn in the lab must adequately protect the top of the foot. Gloves must be worn by all persons dissecting cadavers. Students must wear lab coats over street clothes.

13) Respect for others in the close-quarter conditions of the lab around the dissection/cadaver tables must be shown. If you are ill or have an upper respiratory tract infection, a surgical mask should be worn to cover the mouth and nose.

14) Report any injury, lightheadedness, or skin irritation to a faculty member immediately. If injured, you may be taken immediately to the E.D., or security may be called to initiate transport if necessary.

15) Professional behavior must be exhibited at all times. No disrespect toward fellow students, faculty, staff, the laboratory and its resources, or the cadaver will be tolerated at any time.

16) No music playing (including radios) is allowed during scheduled lab sessions. After 3 pm, music playing is permitted.

C. LAB SECURITY:

The Multifunction Labs (L60) are open 5 AM – midnight each day, 7 days a week, to first year medical students, faculty and other personnel possessing the proper identification and key card access. In the 5-7 days prior to exams, the lab will be open 24 hours/day. Students are expected to comply with the Laboratory Regulations (Section XII, B) at all times.

Washroom facilities for changing, showering, and clothing storage in lockers are provided immediately adjacent to the dissection area in the lower level locker rooms. Please bring a lock to ensure your belongings are secure; we are not responsible for any lost or stolen items. Please maintain the cleanliness of these areas as a courtesy to the many others using them. <u>All personal items must be removed from lockers by the end of the semester.</u>

Visitors to the facility must be cleared through the course directors (please see Laboratory Regulations).

D. EMBALMING:

The embalming process is done professionally by State of Illinois-licensed embalmers. Our cadavers are obtained from the Anatomical Gift Association of Illinois which receives them as donations.

The embalming solution contains: 5% formaldehyde, 33% methanol, 33% glycerine, and 27% phenol. MSDS sheets for each component are available upon request.

Students who experience respiratory or contact-sensitivity reactions to these ingredients are advised to notify the Course Director and seek medical attention if necessary. Adequate precautions against skin contact must be taken (e.g. wearing gloves, wearing proper dissection clothing and lab coats, as well as impermeable plastic aprons, face masks, etc., as necessary). Our Safety and Security office inspections the dissection bays; air handing and air exchange are at OSHA standards that are monitored and maintained.

11. CONTACT INFORMATION

SHB Course Director:
Michael Dauzvardis, PhD.
Assistant Professor, Department of Medical Education
SSOM Bldg 120, Room 264
mdauzva@luc.edu

SHB Assistant Course Director:
Robert Frysztak, PhD.
Associate Professor, Department of Medical Education
SSOM Bldg 120, Room 262
rfrysztak@luc.edu

Janet Kelly, PhD.
Assistant Professor, Department of Medical Education
SSOM Bldg 120, Room 261
jkelly15@luc.edu

SHB Course Coordinator:
Agape Lamberis, B.S.
Medical Education Coordinator, Department of Educational Affairs
SSOM Bldg 120, Room 310
aglamberis@luc.edu
708-216-8779 (office)