Biology 1191-1 Selected Topics - Anatomía
Cat Dissection with human correlates in Spanish
Fall term 2011
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Office Hours: Wednesday 9:30 to 12:30, Thursday 11:30 to 2:30, and by appointment

Teaching Assistants class year contact information
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Class Time: 4:00 pm to 5:15 pm Tuesday and Thursday MarsMcLean 225 Note: it takes
time to set up and take down a dissection. Please be prepared to come several minutes
early and leave several minutes late.

Course Objectives:
1) This all-lab course (no lecture) serves as an introduction to mammalian anatomy
using cat as the principal example with correlates to humans. Anatomical specimens
include the following: cat, sheep brains, pig hearts, and bones from various sources.
2) Much of the material will be presented and discussed in Spanish. Many
anatomical terms are rooted in Latin and anatomical descriptors are essentially the same in
Spanish as they are in English.
3) This course also serves to establish a community of biology scholars who can
explore biology in two languages. A longer-range goal is to provide support for entering
biology students who may be bicultural and bilingual.

Learning resources:
Allen and Harper have developed a very concise, selective, well-done lab manual.
The 48-page text is divided into seven dissection sessions. The excellent color photographs
are accompanied by interpretive line drawings. Roxana Khozein, with the assistance of
Danielle Roberts, has translated this lab manual. The Spanish version will be distributed as
a .pdf. You may wish to purchase the English version via Amazon.com.
Gary Thibodeau y Kevin Patton. Elsevier España. ISBN 978-0-323-04966-5. $62.00. This
is a comprehensive textbook for which the English edition has been around for a long time.

Cat Anatomy Web sites:
You may find these web sites listed below useful.
1. Esqueleto del gato – a simple clear diagram of the basic cat skeleton – El
Diccionario Visual http://www.infovisual.info/02/067_es.html
2. Felinia. A composite site that has French, English, and Spanish connections. It is a well done site that is in Spanish. We will refer to this site from time to time. http://www.felinia.org/f3/anat/anatomintro.htm

3. Virtual Cat Dissection. This English site is used in the Felinia site. The origin is from a branch campus of Penn State. http://bio.bd.psu.edu/cat/


Safety:
The dissection specimens have been preserved in formaldehyde chemicals. These chemicals can be harmful to the skin, eyes, and respiratory system. You must use precautions when working with the specimens. Work in well-lighted and well-ventilated environments. Minimize skin contact with the specimen by wearing disposable gloves. Do not rub face or eyes while wearing the gloves. A lab coat protects clothes from the specimen.

Do not eat or drink in the lab. Preservatives are dangerous chemicals.

When you start a dissection session, lay out your work area carefully. Put everything in a proper place. Be obsessive about it. Have paper towels nearby. Know where a first-aid kit is located in case of cuts. When through, clean the work area very carefully. If you should injure yourself, there is paperwork to perform.

As you work, you will refer to written text material or perhaps a computer screen. Take precautions not to impregnate paper or computer keyboards with preservative materials from your gloves. This is not easy to do and will take some effort to resolve. Some people use plastic wrap to place over reference materials when dissecting... or some people will make temporary copies of reference material that can be disposed of after a dissection session.

Some people (not many) have allergies to latex gloves. There are alternatives. If necessary, non-latex gloves can be provided.

"Don't run with scissors." You are working with sharp, pointed dissection equipment that is designed to take apart flesh, muscle, skin, bones, and the like. The same equipment can take apart your skin, etc. Be careful, very careful. Always clean and store equipment properly at the end of a lab session.

Dispose of used gloves properly. Dispose of anatomical parts (dissected parts, resected fat, for example) in a proper fashion. Always bag your specimens properly when storing for future use. Clean, clean, clean. You must at the end of a lab session carefully wash your hands.

Respect your specimen. The cat was a living creature before it became a specimen for your study. Don't play with it. Some people act silly when they have to dissect a familiar object. In a fashion, it is a way to deal with tension. Some people get very nervous about cutting a formally living animal. I will reject from lab any student who disrespects his/her lab specimen!

No visitors to the lab. This is out of respect to the animal and to other people. This is serious business. There are individuals, who through sincere motivation, do not want you to dissect any animal. Please know that these cats were obtained through legal sources and were not street-caught "to make a buck." Again, no visitors to the lab.
Although this is an all-lab class and written work is minimal, you do need to prepare for each session. Lab coats, gloves, dissection equipment, and study specimens are all provided. Eye protection is available. It is best to wear closed-toe shoes and avoid wearing jewelry.

Course mechanics:
Attendance is mandatory and active involvement in anatomical dissection is expected. The Trinity University Honor Code will be followed. There will be four oral laboratory practicals (approximately two weeks apart). Each student will present anatomical topics and answer questions posed by the examiners – all in Spanish. Active participation and contribution to the GI video will be graded. The last class is December 1. There is no final. The course will have six peer instructors as well as R. V. Blystone. Each peer instructor will give two or three lab introductions during the semester. Demeanor and decorum are important.

Prerequisites:
• Co-enrollment or completion of Biology 1311
• Conversational in Spanish often equated with Span 2302 or equivalent
• Permission of the instructor
• Pre-health professions students are favored

Tentative Schedule:

Agosto 30 (Martes) Posición Anatómica, Direcciones Anatómicas, Planos o Secciones Corporales, Cavidades Corporales, Regiones Corporales. Daniel Laucirica
Septiembre 1 (Jueves) Sistemas de órganos del cuerpo: integumentario, esquelético, muscular, nervioso, endocrino, circulatorio, linfático, respiratorio, digestivo, urinario, reproductor. Dani Roberts
Septiembre 6 (Martes) Sistema Esquelético: Estructura de los huesos largos; División del esqueleto – axial y apendicular; Huesos de la cabeza y columna vertebral. Paola Almeida
Septiembre 8 (Jueves) Extremidad superior e inferior: gato y humano
Septiembre 13 (Martes) Comparative osteology - Blystone
Septiembre 15 (Jueves) Práctico de laboratorio – examen oral; resumen esquelético del sistema
Septiembre 20 (Martes) Sistema muscular: conexiones de un músculo; los movimientos corporales; pelar el gato Aparna Gomes
Septiembre 22 (Jueves) Músculos de la cabeza y del cuello; músculos del pecho; músculos del abdomen; músculos de la espalda y del hombro Lindsey Breier
Septiembre 27 (Martes) Músculos del brazo y antebrazo, músculos del muslo; músculos de la pierna. Roxana Khozein
Septiembre 29 (Jueves) Paráctico de laboratorio – examen oral; resumen de los músculos del sistema

Octubre 4 (Martes) Sistema cardiovascular: corazón y aparato circulatorio Lindsey Breier
Octubre 6 (Jueves) Corazón: aurículas y ventrículos; válvulas cardíacas; sistema de conducción; ECG; suministro de sangre al músculo cardíaco; cirugía de bypass coronario Roxana Khozein

Octubre 11 (Martes) Estructura de la arteria y de la vena; principales arterias y venas del cuerpo; circulación portal hepática Dani Roberts
Octubre 13 (Jueves) Práctico de laboratorio – examen oral; resumen del sistema cardiovascular

Octubre 18 (Martes) Sistema nervioso: central y periférico; Células: neuronas y glía; Fisiología: arcos reflejos, impulsos nerviosas, y sinapsis. Daniel Laucirica
Octubre 20 (Jueves) Encéfalo o cerebro: Truco – bulbo requídeo, puente, mesencéfalo; Cerebelo; Diencéfalo; hipotálamo, tálamo; Cerebro y sus piezas; Espacios líquidos; Médula espinal. Paola Almeida

Octubre 25 (Martes) Nervios craneales; Sistema nervioso autónomo: simpático y parasimpático; fibras colinérgicas y fibras adrenérgicas. Aparna Gomes
Octubre 27 (Jueves) Práctico de laboratorio – examen oral; resumen del sistema nervioso

Noviembre 1 (Martes) Aparato digestivo (canal alimentario o tubo digestivo): de la boca al ano: mucosa, submucosa, capa muscular, serosa; producción de un video para U-tube. Peer tutor XX
Noviembre 3 (Jueves) Boca; la lengua; tipos de dientes; glándulas salivares; faringe; esófago. Peer tutor YY

Noviembre 8 (Martes) Estómago; ERGE; intestino delgado; intestino grueso; válvulas; peritoneo; apéndice; hígado y pancreas. Peer tutor ZZ
Noviembre 10 (Jueves) Primera escritura video; video storyboard; TV producción

Noviembre 15 (Martes) Sesión video uno
Noviembre 17 (Jueves) Crítica y revision

Noviembre 22 (Martes) Sesión video dos
Noviembre 29 (Martes) Crítica
Diciembre 1 (Jueves) Fiesta de la clase