070:354 Spring 2006

FUNCTIONAL AND DEVELOPMENTAL ANATOMY OF THE PRIMATE SKELETON

Department of Anthropology, Rutgers University
Instructor: Rhonda Quinn

Functional and Developmental Anatomy of the Primate Skeleton (3 credits) will examine form and function through the comparative anatomy of humans and their primate kin. We will partition the body into three segments: back and limbs, body cavities, and head and neck and investigate how locomotor repertoire, diet, body size, and activity influence the primate bauplan. Integrating developmental bone biology, functional morphology and biomechanics, and descriptive musculoskeletal anatomy, we will explore the similarities and differences between the primate species.

PREREQUISITES: Introduction to Physical/Biological Anthropology or equivalent.

CLASS MEETINGS:	3 hours per week Biosciences Building 202, Douglass Campus Tuesday 9:15 am – 12:15 pm
LABORATORY SESSIONS:	1 hour per exam unit (3 hours total) Biosciences Building 104, Douglass Campus Pre-arranged small-group sessions
OFFICE HOURS:	Biosciences Building 201a, Douglass Campus Open door policy & by appointment (rlquinn@rci.rutgers.edu, 932-6760)

GRADED WORK:
Three non-cumulative examinations will be given at the end of each anatomical unit and will contain both written and practical components. All examinations are equally weighted, and together, contribute 75% of your total grade. The remaining 25% of your grade is participation. You are expected to attend lecture and laboratory sessions, well prepared. Attendance points, pop-quizzes, and participation points will all contribute to your participation grade.

REQUIRED TEXTBOOK:
An Introduction to Primate Anatomy (2nd Edition) by Friderun Ankel-Simons

REQUIRED DISSECTOR:
A Comparative Primate Anatomy Dissection Manual edited by Rebecca Rogers Ackermann

Our textbook is available at the Rutgers University Bookstore. Copies of the dissector and a pdf will be made available the first week of class. Copies of handouts and accessory readings will be made available one week prior to discussion. Additional (optional) reference materials are also available upon request and/or housed in the laboratory.

ASSIGNED READINGS
All readings are from Primate Anatomy by Ankel-Simons, denoted by **PA**, or the dissection manual by Ackermann, **DM**.

DATE	LECTURE TOPICS & EXAMINATIONS	ASSIGNED READINGS
Jan 17	Course Overview The Primate Order, Taxonomy, The Primate Body	PA: Chapters 1-4 DM: 1-7
Jan 24	Anatomical & Directional Terms, Bone Biology, The Musculoskeletal System Locomotor Repertoires of Primates	Handout PA: 327-347
Jan 31	Back: Vertebral Column, Postural Behavior, Habitat Structure	PA: Chapter 8 DM: 8-35
Feb 7	Shoulder Girdle and Forelimb, Locomotion, Habitat Manipulation	PA: Chapter 8 DM: 8-35
Feb 14	Pelvic Girdle and Hindlimb, Locomotion, Body Size and Proportions	PA: Chapter 8 DM: 36-64
Feb 21	FIRST EXAMINATION	
Feb 28	Primate Diet, Body Size and Proportions, Expensive Tissue Hypothesis	PA: Chapter 4, Handout Accessory Reading
Mar 7	Thorax, Circulatory and Respiratory Systems	PA: Chapter 8
Mar 14	*Spring Break*, **NO CLASS**	
Mar 21	Abdomen, Diet and the Intestinal Tract	PA: Chapter 9 (380-385)
Mar 28	Pelvic cavity, Reproduction, Growth and Development	PA: Chapters 10-11
Apr 4	SECOND EXAMINATION	
Apr 11	Skull, Senses and the Brain, Dentition, The Oral Cavity, and Diet	PA: Chapters 5, 6, 7, 9
Apr 18	Eyesight, Olfaction, and Hearing; Activity Patterns, Predator-Prey Interactions	PA: Chapters 5, 9
Apr 25	Species Recognition, Male-Male Competition, Mate Selection, Defense	
May 2	*Reading Day*, **NO CLASS**	
May 5	THIRD EXAMINATION	12:00 – 3:00 pm

LABORATORY RULES & REGULATIONS
BIO 202
No food or drink is permitted in the laboratory. Open lab hours will be scheduled throughout the week for independent study. When handling skeletal material, you must work over one of the carpeted tables. Use of incandescent light is encouraged to view bone features.

BIO 104
See additional handout.