GRADUATE COURSE DESCRIPTIONS (HBA)  

HBA  
Anatomical Sciences  

HBA 521: Gross Anatomy of Head, Neck, and Trunk  
Tutorial laboratories with emphasis on dissections of the human head, neck, and trunk.  
8 credits, Letter graded (A, A-, B+, etc.)  

HBA 531: The Body  
A lecture and laboratory with emphasis on dissection of the entire human body. Topics include functional and topographic anatomy, embryology, clinical correlations, and an introduction to radiology.  
8 credits, S/F graded  

HBA 540: Human Anatomy for Physical Therapists  
Lecture followed by laboratory dissection of the human body. Regional approach to the gross anatomy of the human body for physical therapy graduate students (DPT). The course is presented in three modules. Module one covers the back, thorax, abdomen, pelvis and perineum. Lectures will cover the regional anatomy of the above as well as conceptual information about the peripheral nervous system, the heart and respiratory system. Module two covers the brain, head and neck. Lecture will address the anatomy and organization of the central nervous system, the cranial nerves, introduction to the anatomy of the special senses and mastication. Module three will offer an expanded view of the functional anatomy of the limbs and musculoskeletal system. Lectures will address the functional anatomy of the hand and the foot as well as posture and locomotion. In module three clinical faculty will address the latest developments in radiology and skeletal imaging, and the clinical anatomy of the back, shoulder, elbow, hand, hip, knee, and foot.  
6 credits, Letter graded (A, A-, B+, etc.)  

HBA 541: Evolutionary Anatomy  
A lecture and laboratory with emphasis on dissection of the entire human body. Includes functional and comparative anatomy with special emphasis on the musculoskeletal morphology of humans and higher primates. This course is offered as both DPA 541 and HBA 541.  
Prerequisite: permission of instructor  
Fall, 8 credits, Letter graded (A, A-, B+, etc.)  

HBA 542: Advanced Human Anatomy for Physical Therapists  
Regional approach to the gross anatomy of the lower limb for physical therapy graduate students (DPT). The course is presented in conjunction with HYA519, Kinesiology for Physical Therapists. This module will offer an expanded view of the functional anatomy and arthrology of the hip, thigh, leg and foot. Labs will be three hours, one day per week. Enrollment will be limited to DPT students.  
S/U grading  

HBA 550: Vertebrate Evolution  
Survey of the fossil record of vertebrate evolution. The course emphasizes the origin, phylogeny, comparative and functional morphology, biogeography, and paleontology of vertebrate animals. Laboratory included. The lectures and laboratories will utilize an extensive collection of comparative anatomical material, fossil casts, and slides.  
Prerequisite: Previous course in human or vertebrate anatomy and permission of instructor.  
Spring, alternate years, 4 credits, Letter graded (A, A-, B+, etc.)  

HBA 551: Phylogenetic Systematics, Biogeography and Comparative Methods  
This course will provide students with a familiarity in the practical application of modern phylogenetic methods and the use of phylogenies in framing evolutionary hypotheses. The course will have both a lecture and laboratory component with lectures including in-class discussions of assigned readings. Lab exercises will be devoted to hands-on experience with available software for phylogenetic and comparative methods. Comparative methods examined will include a focus on historical biogeography as well as ancestral state reconstruction, rates of evolution and diversification, and analysis of adaptation and key innovations.  
4 credits, Letter graded (A, A-, B+, etc.)  

HBA 563: Aspects of Animal Mechanics  
An introduction to biomechanics. Covers freebody mechanics and kinetics as applied to vertebrate locomotion. Considers the structure and physiology of muscle as it relates to adaptations of the musculoskeletal system. This course is offered as both HBA 563 and DPA 563.  
Prerequisites: Introductory physics and biology or permission of instructor.  
Spring, odd years, 2 credits, Letter graded (A, A-, B+, etc.)  

HBA 564: Primate Evolution  
The taxonomic relationships and evolutionary history of primates as documented by their fossil record and structural and chemical evidence. Emphasis on primates prior to the origin of the human lineage. This course is offered as ANT 564, DPA 564 and HBA 564.  
Spring, even years, 4 credits, Letter graded (A, A-, B+, etc.)  

HBA 565: Human Evolution  
A survey of the fossil record of hominid evolution through the Pliocene and Pleistocene with emphasis on the morphological structure and function of locomotor, masticatory, and neural systems. Includes utilization of comparative anatomical material and an extensive cast collection. This course is offered as ANT 565, DPA 565 and HBA 565.  
Fall, even years, 4 credits, Letter graded (A, A-, B+, etc.)  

HBA 566: Studies in Functional Morphology  
Introduction to the theory and methods of functional morphology. Various methods of analysis and the application of experimental techniques such as electromyography or bone strain analysis are discussed as they pertain to the understanding of the interaction between form and function. Special emphasis is placed on the analysis of human and nonhuman primate morphology, and the application of this analysis to interpretation of the fossil evidence for human and nonhuman primate evolution. This course is offered as both HBA 566 and DPA 566.  
Prerequisite: Permission of instructor.
HBA 582: Comparative Anatomy of Primates

The comparative anatomy of living primates. Laboratory dissection with emphasis on relating structural diversity to behavior and biomechanics. This course is offered as both HBA 582 and DPA 582.

Prerequisites: HBA 364 and previous course in human or vertebrate anatomy and permission of instructor.

Spring, alternate years, 4 credits, Letter graded (A, A-, B+, etc.)

HBA 590: Projects in Anatomical Sciences

Individual laboratory projects closely supervised by faculty members to be carried out in staff research laboratories.

Prerequisite: Permission of instructor.

Spring, 1-6 credits, S/U grading
May be repeated 3 times FOR credit.

HBA 690: Graduate Seminar

Seminars by graduate students on current literature in the areas of the anatomical sciences.

Prerequisite: Permission of instructor.

Spring, 1 credit, S/U grading
May be repeated 3 times FOR credit.

HBA 692: Advanced Topics in Anatomical Sciences Literature

Tutorial readings in anatomical sciences with periodic conferences, reports and examinations arranged with the instructor.

Prerequisite: Permission of instructor.

Spring, 1-2 credits, S/U grading
May be repeated for credit.

HBA 695: Practicum in Teaching

Practical instruction in the teaching of anatomical sciences carried out under faculty supervision.

1-4 credits, S/U grading
May be repeated for credit.

HBA 699: Dissertation Research on Campus

Original investigation under supervision of thesis adviser and committee.

Prerequisite: Advancement to candidacy (G5); permission of thesis advisor. Major portion of research must take place on SBU campus, at Cold Spring Harbor, or at the Brookhaven National Lab.

Summer, 1-9 credits, S/U grading
May be repeated for credit.

HBA 700: Dissertation Research off Campus - Domestic

Prerequisite: Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.

Fall,
Spring, 1-9 credits, S/U grading
May be repeated for credit.

HBA 701: Dissertation Research off Campus - International

Prerequisite: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health insurance and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver for the second week of classes. The charge will only be removed if other plan is deemed comparable.

All international students must receive clearance from an International Advisor.

Spring, 1-9 credits, S/U grading
May be repeated for credit.

HBA 800: Full-Time Summer Research

Full-time laboratory research projects supervised by staff members.

S/U grading
May be repeated for credit.