CELL BIOLOGY & HUMAN ANATOMY (CHA)

School of Medicine

CHA 101 — Human Gross Anatomy (4 units)

Course Description: Detailed study of the gross anatomical structure of the human body, with emphasis on function and clinical relevance to students entering health care professions.
Prerequisite(s): BIS 002A; concurrent enrollment in EXB 106L or CHA 101L strongly recommended.
Learning Activities: Lecture 4 hour(s).
Enrollment Restriction(s): Upper division students only; Pass One open to upper division Exercise Biology or Anthropology majors only; Pass Two open to Seniors in any major; open enrollment at the start of the quarter for upper division students in any major.
Cross Listing: EXB 106.
Grade Mode: Letter.
General Education: Science & Engineering (SE).

CHA 101L — Human Gross Anatomy Laboratory (3 units)

Course Description: Detailed study of prosected human cadavers in small group format with extensive hands-on experience.
Prerequisite(s): BIS 002A; (EXB 106 (can be concurrent) or CHA 101 (can be concurrent)); if EXB 106 or CHA 101 is not taken concurrently, it must have been already completed.
Learning Activities: Laboratory 9 hour(s).
Enrollment Restriction(s): Upper division students only; Pass One open to upper division Exercise Biology or Anthropology majors only; Pass Two open to Seniors in any major; open enrollment at the start of the quarter for upper division students in any major; mandatory attendance on first day of lab.
Cross Listing: EXB 106L.
Grade Mode: Letter.
General Education: Science & Engineering (SE).

CHA 102 — Human Microscopic Anatomy: Structure & Function of Human Tissues & Organ Systems (4.5 units)

Course Description: Complements Gross Anatomy by extending the study of structure to the microscopic level. Shows how cells are assembled into tissues, and tissues into organs, with an emphasis on demonstrating how microscopic structure explains function.
Prerequisite(s): BIS 104.
Learning Activities: Lecture 3 hour(s), Discussion/Laboratory 4 hour(s).
Enrollment Restriction(s): Limited enrollment.
Grade Mode: Letter.
General Education: Science & Engineering (SE).

CHA 103 — Human Clinical Neuroanatomy (4 units)

Course Description: Clinically relevant anatomy of the normal human nervous system, including external and internal anatomy of the brain, spinal cord, and cranial nerves. Blood supply to the brain and spinal cord. Functional neuroanatomy of motor, sensory, and cognitive systems. Application of neuroanatomical principles relevant to clinical problem solving for students entering health care professions.
Prerequisite(s): CHA 101; or consent of instructor.
Learning Activities: Lecture 3 hour(s), Laboratory 3 hour(s).
Enrollment Restriction(s): Open to upper division students.
Cross Listing: NEU 103.
Grade Mode: Letter.
General Education: Science & Engineering (SE).

CHA 105 — Advanced Human Gross Anatomy (4 units)

Course Description: Clinically relevant advanced human gross anatomy and anatomical variation. Detailed human cadaver dissection, close reading and analysis of anatomical variation research literature, and intensive study of anatomical structures and relationships.
Prerequisite(s): (CHA 101 C- or better or EXB 106 C- or better); (CHA 101L C- or better or EXB 106L C- or better); consent of instructor.
Learning Activities: Laboratory 6 hour(s), Seminar 2 hour(s).
Grade Mode: Letter.
General Education: Science & Engineering (SE); Oral Skills (OL); Scientific Literacy (SL).

CHA 192 — Internship in Morphology (1-12 units)

Course Description: Experience of supervised internship in research laboratories of members of the department.
Prerequisite(s): Upper division standing; laboratory science experience including some chemistry; approval of project by preceptor prior to period of internship.
Learning Activities: Internship 3-36 hour(s).
Grade Mode: Pass/No Pass only.

CHA 197T — Tutoring in Cell Biology & Human Anatomy (1-5 units)

Course Description: Provides laboratory instruction in gross and microscopic human anatomy, with small groups of undergraduates under the supervision of the instructor.
Prerequisite(s): CHA 101 B or better; and consent of instructor.
Learning Activities: Discussion 1 hour(s), Laboratory 6-9 hour(s).
Grade Mode: Pass/No Pass only.

CHA 198 — Directed Group Study (1-5 units)

Course Description: Directed reading, discussion, and/or laboratory experience on selected topics.
Prerequisite(s): Consent of instructor.
Learning Activities: Discussion 1-10 hour(s).
Grade Mode: Pass/No Pass only.

CHA 199 — Special Study for Advanced Undergraduates (1-5 units)

Course Description: Special study for advanced undergraduates.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Pass/No Pass only.

CHA 200 — Graduate Human Gross Anatomy (6 units)

Course Description: Lectures on human gross anatomy and cadaver dissection laboratory. Topics arranged by region; emphasis on osteology, neuromuscular anatomy, cardiovascular anatomy, gastrointestinal anatomy and anatomy of reproductive systems.
Prerequisite(s): Consent of instructor.
Learning Activities: Lecture 4 hour(s), Laboratory 6 hour(s).
Enrollment Restriction(s): Open only to full-time graduate students.
Credit Limitation(s): Only 2 units of credit for students who have completed CHA 101.
Grade Mode: Letter.

CHA 202 — Microscopic Anatomy for Researchers (3 units)

Course Description: The growing importance of the use of gene knock-out studies and imaging technology requires significant understanding of basic anatomy. Designed to familiarize students in diverse fields with anatomical, cellular and tissue organization of typical animal models.
Learning Activities: Lecture 2 hour(s), Discussion/Laboratory 3 hour(s).
Enrollment Restriction(s): Open to graduate students in the biomedical sciences (no consent required); advanced undergraduates seeking research careers in the biomedical sciences (consent of instructor required).
Grade Mode: Letter.

CHA 203 — Neurobiology (4 units)

Course Description: Physiology and anatomy of the normal human nervous system in an integrated format.
Prerequisite(s): Consent of instructor. Two upper division or one graduate course in Neurobiology.
Learning Activities: Lecture 3 hour(s), Laboratory 3 hour(s).
Grade Mode: Letter.

CHA 290 — Seminar (1 unit)

Course Description: Seminar.
Prerequisite(s): Consent of instructor.
Learning Activities: Seminar 1 hour(s).
Grade Mode: Satisfactory/Unsatisfactory only.

CHA 290C — Research Group Conference (1 unit)

Course Description: Discussion of problems, progress and literature groups relevant to current research undertaken by laboratory groups Human Anatomy.
Prerequisite(s): Consent of instructor. Graduate student with research experience (may be taken concurrently).
Learning Activities: Discussion 1 hour(s).
Grade Mode: Satisfactory/Unsatisfactory only.

CHA 298 — Advanced Group Study (1-5 units)

Course Description: Advanced group study.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Letter.

CHA 299 — Research (1-12 units)

Course Description: Research.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Satisfactory/Unsatisfactory only.

CHA 403 — Medical Neuroanatomy (5 units)

Starting Spring Semester 2026, this course is no longer offered.
Course Description: Anatomy of the normal human nervous system, to include gross external and internal morphology of brain and spinal cord, and function neuroanatomy of motor, sensory and cognitive systems. Incorporates application of neuroanatomy to clinical problem solving.
Prerequisite(s): CHA 400; Block 1.
Learning Activities: Lecture 3 hour(s), Laboratory 1 hour(s), Discussion/Laboratory 1 hour(s).
Enrollment Restriction(s): Restricted to medical students only.
Cross Listing: HPH 403.
Grade Mode: Pass/Fail only.

CHA 493B — Anatomy Medical Education Special Study Module (6 units)

Course Description: Attend all of the lectures and laboratory sessions for CHA 400 and CHA 402 during the four-week section; approximately seven anatomy labs and three-four histology labs. Tutor first-year students during the laboratory sessions. Prepare and present a clinical correlate session.
Prerequisite(s): Consent of instructor. UC Davis School of Medicine students only.
Learning Activities: Seminar 10 hour(s), Clinical Activity 14 hour(s), Auto Tutorial 6 hour(s), Independent Study 10 hour(s).
Grade Mode: Honors/Pass/Fail.

CHA 497T — Tutoring in Human Anatomy (3-6 units)

Course Description: Assist instructor by tutoring medical students in preparation for one of the departmental courses that is a component of the required curriculum for the School of Medicine.
Prerequisite(s): Advanced standing or consent of instructor.
Learning Activities: Tutorial 3-15 hour(s).
Repeat Credit: May be repeated.
Grade Mode: Honors/Pass/Fail.

CHA 498 — Advanced Group Study (1-12 units)

Course Description: Directed reading and group discussions and/or laboratory experience on selected topics.
Prerequisite(s): Medical students, interns, and residents with consent of instructor.
Learning Activities: Variable.
Grade Mode: Honors/Pass/Fail.

CHA 499 — Research (1-12 units)

Course Description: Research.
Prerequisite(s): Consent of instructor.
Learning Activities: Variable.
Grade Mode: Honors/Pass/Fail.