

# *CLINICAL ANATOMY (CAN)*

Program Director: Thomas Quinn  
Program Office: Criss II, Room 314

## *GRADUATE STUDY IN CLINICAL ANATOMY*

The Master's Program in Clinical Anatomy is offered in the Department of Biomedical Sciences and the collaborating departments of Radiology, Surgery, and Pathology. The program curriculum includes human gross anatomy and neuroanatomy, pathology, surgery, radiology, histology, and embryology as related to clinical practice. Students have opportunities to dissect the entire body, to attend autopsies and surgeries, and to participate in case-based discussions of regional anatomy. A portion of the curriculum will also be devoted to lecture techniques, clinical correlations, computer aided instruction, and to the proper and safe preparation and use of preserved and fresh tissue for anatomical demonstration.

Students must begin the program in August with the study of human gross anatomy. The program of study lasts 18 months including the Summer Session of the first year. Students will graduate with a Master's Degree in Clinical Anatomy in December.

### *Program Goals*

Within the context of Creighton as a Jesuit, Catholic University, the Master's in Clinical Anatomy Program offers students the opportunity to correlate didactic and dissection experience with applied clinical anatomy. In addition to anatomical lectures and laboratories, students will participate in clinical sessions within the departments of Surgery, Pathology and Radiology. This program encourages students to pursue personal accountability, professional proficiency and commitment to community.

At the completion of this Program, the graduate will:

1. Have the necessary skills and experience to teach clinically relevant anatomy in any of the Health Sciences.
2. Demonstrate critical thinking and the ability to correlate human gross anatomy and neuroanatomy, pathology, surgery, radiology, histology, and embryology as related to clinical practice.
3. Demonstrate ethical decision making, humanitarianism, and civic responsibility.

### *Faculty*

Professors: P. Brauer, L. Bruce, D. Cullen, T. Quinn, J. Yee;  
Associate Professors: A. Kincaid, D. Nichols, N. Norton;  
Assistant Professor: R. Meyer.

### *Admission Requirements*

This course of study primarily is designed for those who wish to continue their professional careers as teachers of clinical anatomy or who will incorporate a significant amount of clinical anatomy teaching into their academic careers. It is also appropriate for those who later intend to pursue further graduate study, to study medicine, or another health care profession. The target group of students also includes those individuals who have had previous graduate training in related fields, but who wish to add practical teaching expertise in clinical anatomy.

Students must have at least a B.S. or B.A. with a strong science component, and have at least a 3.0 grade point average. Students are required to take the Graduate Record Exam (GRE) or an equivalent professional school entrance exam (e.g., MCAT). Graduates of foreign universities for whom English is not the first language are required to take the TOEFL examination.

## ***Master of Science (M.S.) with a Major in Clinical Anatomy***

### *Semester One (Students must begin in Fall Semester)*

CAN 602 Human Gross Anatomy	6 credits
CAN 626 Clinical Embryology	2 credits
CAN 792 Current Topics in Clinical Gross Anatomy	2 credits

### *Semester Two (Spring Semester)*

CAN 630 Human Neuroanatomy	4 credits
CAN 640 Clinical Rotations (Surgery, Radiology, Pathology)	2 credits
CAN 645 Educational Techniques in Clinical Anatomy	2 credits
CAN 792 Current Topics in Clinical Gross Anatomy	2 credits

### *Semester Three (Summer Semester)*

CAN 629 Anatomical Techniques and Topics	2 credits
CAN 645 Educational Techniques	2 credits
CAN 792 Current Topics in Clinical Gross Anatomy	2 credits

### *Semester Four (Fall Semester)*

CAN 603 Microscopic Anatomy	4 credits
CAN 621 Teaching Practicum in Human Anatomy*	4 credits
CAN 792 Seminar in Clinical Gross Anatomy	2 credits
<b>Total Credits</b>	<b>36 credits</b>

\* Tuition is waived for these hours since the students will be teaching medical students.

#### **CAN 602 Human Gross Anatomy (6)** (Same as BMS 602)

Detailed structure of the human body. Dissection of the cadaver combined with conferences, lectures, and assigned readings. 4R, 9L. **P: IC.**

#### **CAN 603 Microscopic Anatomy (4)**

This course provides a comprehensive examination of the light microscopic anatomy and ultrastructure of cells, tissues, and organs. A combination of lectures, discussions, and laboratories is employed with a major focus on a laboratory experience using the light microscope.

#### **CAN 621 Teaching Practicum in Medical Anatomy (4-5)**

Practical experience in teaching human gross anatomy. The students will demonstrate the prosected bodies which they dissected during the previous summer. Each student will also assist with tutorials, test preparation and grading. Students will be required to prepare for each laboratory session and to actively assist the first-year medical students in the laboratory. Students will be evaluated by the medical students as well as by the course faculty. **P: IC.**

#### **CAN 626 Clinical Embryology (2)**

This is a course in human anatomy designed to provide students with insight into the important correlation between human development anatomy and gross anatomy. The course will cover development of all of the systems of the body. The fetus, placentation, birth and delivery also will be dealt with. Major congenital malformations will be discussed in detail. **P: IC.**

#### **CAN 629 Anatomical Techniques and Topics (2)**

The proper preparation, care and preservation, for gross anatomical specimens will be dealt with. Techniques by which individual systems and tissues may be demonstrated and used by the students in this course. These techniques will include latex and corrosion casting, prosection preparation, and long-term preservation of specimens. Students will learn basic embalming techniques and formulation of preservation fluids. Management of body donation programs and interaction with the public will be discussed as will the ethics of human tissue use. The management and safe use of fresh tissue dissection facilities will be discussed. Students will participate in the design of a modern facility for clinical anatomy study. **P: IC.**

**CAN 630 Human Neuroanatomy (4)**

The students in this course will have the opportunity to study the gross and histological anatomy of the central and peripheral nervous systems. The course will include dissection of the brain and spinal cord and study of the circulatory system of the central nervous system. The students also will study basic neurology. **P: IC.**

**CAN 640 Clinical Rotations and Discussion Group (2-4)**

This course provides opportunities to experience day to day applications of gross anatomy in the clinical specialities of surgery, radiology, and pathology. Weekly discussions of the various cases will be held during which the pertinent anatomical correlations will be analyzed as will methods of best conveying to health sciences students the clinical information gained. Students will be expected to write a synopsis of each case and conduct the necessary literature research for a current relevant bibliography. This course is repeatable up to eight credits. **P: IC.**

**CAN 645 Educational Techniques in Clinical Anatomy (2)**

The opportunity to design and implement educational techniques appropriate for lecture, small group, and laboratory applications. Each student will prepare and deliver two formal lectures which will be videotaped and constructively critiqued by faculty and peers. Approaches to computer-aided educational techniques will be considered as will specific teaching strategies for traditional lectures and tutorials. **P: IC.**

**CAN 792 Current Topics in Clinical Gross Anatomy (1-3)**

Provides a discussion group which is focused on current literature in clinical anatomy, surgery, pathology and radiology as it directly pertains to the study and clinical application of anatomy in the health sciences. This course is repeatable up to eight credits **P: IC.**

***CLINICAL AND TRANSLATIONAL SCIENCE (CTS)***

Program Director: Devendra K. Agrawal  
Program Office: Criss II, Room 510

***GRADUATE STUDY IN CLINICAL & TRANSLATIONAL SCIENCE***

The Center for Clinical and Translational Science (CCTS) at Creighton University is committed to the cutting-edge multidisciplinary clinical and translational research in a manner that builds upon current science strengths to help bring about an era of personalized medicine. The Center is an innovative resource to support and advance education, collaboration and research in clinical and translational science by pooling existing strengths and expertise together. The goal is to increase the number, quality and diversity of clinical and translational researchers and promote research and intellectual exchange among diverse professionals that elicit novel approaches to area health care priorities and fostering long-term, bi-directional relationships with academic and community partners. An integral part of this commitment is to identify, educate, and create a mentored environment to develop and enrich the career of next generation of clinical and translational researchers to become independent investigators, and engage the community in clinical research efforts.

***Program Goals***

Successful scholars in the CTS program will be mentored and supported to write independent research grant applications. Scholars will be enrolled either as full-time or part-time scholars. The CTS graduate program will provide a structured course curriculum. Since the stature comes with recognition of qualifications, successful scholars will earn Graduate Certificate in CTS and MS in CTS. The graduates of the CTS program will:

1. demonstrate the competence and knowledge in applied biostatistics, federal policies in clinical and translational research, and disparity in global health issues as they pertain to the community;
2. demonstrate an ability to combine critical thinking, disciplined research, and effective problem-solving both within their field of study and beyond, for use in the service to others;