The objectives of the graduate program through Saint Louis University's Center for Anatomical Science and Education (CASE) are: to provide innovative scholarship and effective teaching in all aspects of the structure of the human body, to offer training programs in the anatomical sciences for graduate students, to assist in M.D. or Ph.D. postdoctoral training, and to stimulate interest in research and advance the frontiers of knowledge and technical expertise by active participation in a variety of research projects.

Graduate students perform research projects by working with a faculty mentor whose research interests match their own. Doctoral students are expected to publish and present a minimum of two research projects.

The center’s faculty are engaged in multidisciplinary research of biological structure and function ranging from ultrastructural to gross anatomical levels, with a major interest in clinically relevant anatomy and neurobiology. Other research interests include cell biology and pathobiology. Facilities are available for autoradiography, electrophysiology, gel electrophoresis, immunoblotting, immunostaining (immunocytochemistry, immunohistochemistry, immunofluorescence), high-performance liquid chromatography, in situ hybridization, microsurgery, stereotaxic neurosurgery, microinjections and animal behavioral assays. The center is also equipped to perform optical imaging, including bright field, phase contrast and fluorescence microscopy.

M.S.:

There are two options for a master’s degree in anatomy: thesis and project. The thesis option provides advanced training in anatomy for individuals interested in teaching fundamental courses in anatomy and serves as an introduction to biomedical research. It is also appropriate for those whose main interests are in related fields such as medicine or the allied health professions. A total of 30 credit hours, including six hours of thesis research, are required for graduation.

The project option provides training in anatomy with a capstone project and is appropriate for students who want to fulfill a professional aspiration to teach human anatomy structure and function. It is also appropriate for students who are undecided about a career in the health professions and want to improve their academic background before applying to professional schools such as medicine, dentistry or allied health professions. A total of 30 credit hours is necessary to complete the degree.

Ph.D.:

The doctoral degree in anatomy provides training in clinical human anatomy and independent research for individuals seeking a career in teaching and research at the medical school or university level. Dissertation research is related to the center’s current research focus including examining clinically relevant topics in neurobiology, pathology, and/or biological structure and function. A concentration in neurobiology provides training for students preparing for academic or professional careers in neuroscience-related areas. A total of 48 credit hours (36 hours of coursework and 12 hours of dissertation research) are required for graduation.

Career Paths:

Possible careers for graduates include medical doctor, allied health professional and academia.
Anatomy
+ Center for Anatomical Science and Education

FACULTY

Michael Ariel, Ph.D.: How the brain processes visual sensations and controls the eye position during head and eye movements

Craig Lawson, M.D., Ph.D.: Characterization of aneuploid cell population, apoptosis in tumor cells, pro- and anti-apoptotic factors in Sutent resistant GIST cell lines

Joshua W. Little, D.C., Ph.D.: Characterizing the neurobiology of pain by examining how the brain modulates spinal cord pain processing during chronic musculoskeletal pain

John R. Martin, III, Ph.D.: Anatomical studies of orofacial clefts in response to maternal carbon monoxide exposure

Solomon Segal, M.D.: Anatomy of the white matter and subcortical nuclei, neural circuits implicated in neuropsychiatric diseases, circuit-based therapies and surgical treatments for neuropsychiatric diseases

Yun Tan, M.D., Ph.D.: Interests in basal forebrain area

MariaTeresa A. Tersigni-Tarrant, Ph.D., D-ABFA: Multiple aspects of bone biology including bone growth and development; manifestations of child abuse on bone (fracture patterning and fracture healing), bone pathology and bone histology (including human/nonhuman differentiation)

Paul A. Young, Ph.D. Emeritus: Innovative medical education

CONTACT INFORMATION

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PROGRAM HIGHLIGHTS

CASE has been an established academic center providing expert anatomical education for over 100 years.

Students receive training from a diverse team of award-winning clinical anatomists dedicated to teaching and training them.

We are an exciting, growing and dedicated research program that is supportive, collaborative and team oriented.

Students have the opportunity for research projects with a dedicated scientific support staff to assist them.

Many students present their research at local and national scientific conferences and co-author publications.

FINANCIAL SUPPORT

Scholarships and financial aid are available. For more information, please visit the website of the office of scholarship and financial aid: finaid.slu.edu.