

# ANATOMY - MD (ANAT)

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## ANAT 503: Gross Anatomy

6 Credits

Gross structure, organization, and function of the human body with laboratories devoted to dissection of the human body.

## ANAT 505: Histology and Embryology I

2 Credits

Light and electron microscopic structure of cells, specialized tissues, organization, basic organogenesis, correlation between cellular structure and physiological function.

## ANAT 506: Histology and Embryology II

2 Credits

Continuation of ANAT 505; microscopic structure of cells, specialized tissues, organization, basic organogenesis, correlation between cellular structure and physiological function.

**Prerequisite:** ANAT 505

## ANAT 512: Human Embryology and Teratology

2 Credits

Study of developing human embryo including gamete production and fusion, implantation, organogenesis and major abnormalities of organ systems.

## ANAT 515: Developmental Neurobiology

2 Credits

Development of the nervous system in all its aspects.

Cross-listed with: NEURO 515

## ANAT 585: Human Anatomy and Development B: Human Development

1 Credits

Explores human embryology and organogenesis beginning at the third week of gestation through parturition. ANAT 585 ANAT (PHARM) 585 Human Anatomy and Development B: Human Development (1) This course will provide a concise but thorough description of embryology of the major systems in the human. It will provide an awareness of how genetics, environment, and maternal-fetal relationships impact on normal human development, and the importance of understanding embryology for biomedical and translational research. An emphasis will be placed on the role of molecular biology in normal embryology and human development. Primary literature will be consulted for a description of major signaling pathways and key signaling molecules associated with each system. Some discussion of abnormal development will be included.

## ANAT 586: Human Anatomy and Development C: Stem Cell Biology and Regenerative Medicine

1 Credits

Exploration of stem cell biology and the role of stem cells in regenerative medicine. ANAT 586 ANAT (PHARM) 586 Human Anatomy and Development C: Stem Cell Biology and Regenerative Medicine (1) This course will provide an evaluation of stem cell biology and regenerative medicine. In particular, discussions will focus on the five sources of embryonic stem cells (adult stem cells, amniotic fluid-derived stem cells, embryonic stem cells derived using in vitro fertilization technologies, somatic cell nuclear transfer cloning-derived stem cells, and stem cells derived by parthenogenetically-activating oocytes). In addition to providing detailed information on the biology underlying stem cells, group discussions will focus on ethical advantages and disadvantages for each of the five distinct types of stem cells. Work will then turn to current understanding of changes in transcriptome and proteome control of differentiation. As well, discussions will focus on attempts to use stem cells in regenerative medicine. This course will be designed as a mixture of didactic lectures with a particular focus on the current literature. This latter aspect of the course is essential in that much of our current understanding of stem cells has not yet made it into any common text books.

## ANAT 590: Colloquium

1-3 Credits/Maximum of 3

Continuing seminars which consist of a series of individual lectures by faculty, students, or outside speakers.

## ANAT 596: Individual Studies

1-9 Credits/Maximum of 9

Creative projects, including nonthesis research, which are supervised on an individual basis and which fall outside the scope of formal courses.

## ANAT 597: Special Topics

1-9 Credits/Maximum of 999

Formal courses given on a topical or special interest subject which may be offered infrequently; several different topics may be taught in one year or term.

## ANAT 600: Thesis Research

1-15 Credits/Maximum of 999

No description.

## ANAT 601: Ph.D. Dissertation Full-Time

0 Credits/Maximum of 999

No description.

## ANAT 602: Supervised Experience in College Teaching

1-6 Credits/Maximum of 99

Supervised experience in the development of instructional materials, the organization and conduct of lectures/laboratories, the evaluation and counseling of students.

2 Anatomy - MD (ANAT)

ANAT 610: Thesis Research Off Campus

1-15 Credits/Maximum of 999

No description.

ANAT 611: Ph.D. Dissertation Part-Time

0 Credits/Maximum of 999

No description.