The Department of Anatomy and Cell Biology offers training for the investigation of biological and biomedical problems using molecular, cellular, and morphological approaches. Faculty members are active in a diversity of research areas, including cell and developmental biology, neuroscience, vision research, and immunology. Study for the Ph.D. degree includes dissertation research in the laboratory of a faculty member and can generally be completed in four to five years. Students who have also been admitted as medical students can typically complete both M.D. and Ph.D. degrees in six to seven years. Admission to the master's degree program is very limited and based on special circumstances.

ARMANT, D. RANDALL: Ph.D., B.S., Virginia Polytechnic Institute; Professor
BAGCHI, MIHIR: Ph.D., University of Vermont; M.S., Ranchi University; B.S., Bihar University; Associate Professor
BERGER, ELIZABETH: Ph.D., Wayne State University; B.S., Michigan State University; Assistant Professor (Research)
BERKOWITZ, BRUCE: Ph.D., M.A., Washington University; B.A., University of Rochester; Professor
BRAUN, RODNEY D.: Ph.D., M.S., Northwestern University; B.S., Rose-Hulman Institute of Technology; Associate Professor
GOEBEL, DENNIS: Ph.D., M.S., Wayne State University; B.S., Central Michigan University; Associate Professor
GOSHGARIAN, HARRY G.: Ph.D., M.S., University of Michigan; B.S., University of Massachusetts; Professor
HAZLETT, LINDA D.: Ph.D., Ohio State University; M.S., Medical College of Georgia; B.S., St. Mary's College; Professor and Chair
HOLT, AVRIL GENENE: Ph.D., M.S., University of Michigan; B.S., Stillman College; Associate Professor
ICHINOSE, TOMOMI: M.D., Hamamatsu University; Ph.D., Tokyo Medical and Dental University; Associate Professor
IRELAND, MARK E.: Ph.D., M.S., B.S., Wayne State University; Associate Professor
KOWLURU, RENU: Ph.D., Central Drug Research Institute and Kanpur University; M.S., Lucknow University; Professor
MAISEL, HARRY: M.B., Ch.B., University of Cape Town; M.Sc., McGill University; Professor
MCDERMOTT, MARK: M.D., B.S., University of Wisconsin, Madison; Professor
MEYER, DAVID B.: Ph.D., B.A., Wayne State University; M.S., University of Michigan; Professor Emeritus
NANTWI, KWAKU D.: Ph.D., Wayne State University; M.S., B.S., Eastern Illinois University; Associate Professor
PAN, ZHUO-HAN: Ph.D., State University of New York at Buffalo; B.S., University of Science and Technology; Professor
PEDUZZI-NELSON, JEAN: Ph.D., Wayne State University; B.S., University of Michigan; Associate Professor
SINGH, LALIT: Ph.D., Indian Institute of Science; M.Sc., Gujarat University; B.Sc., D M College of Science; Assistant Professor
SKOFF, ROBERT P.: Ph.D., Boston University; B.S., Spring Hill College; Professor
STEINLE, JENA: Ph.D., University of Kansas Medical Center; B.S., University of Bridgeport; Professor
THUMMEL, RYAN: Ph.D., University of Kansas Medical Center; B.A., University of Notre Dame; Assistant Professor
WALKER, PAUL: Ph.D., Temple University; B.S., Albright College; Professor

ANATOMY AND CELL BIOLOGY

Office: 8374 Scott Hall; 313-577-1061
Chairperson: Linda D. Hazlett
http://www.anatomy.med.wayne.edu/

Restriction(s):
Prerequisite:
Equivalent:
Course Material Fees:

ANATOMY AND CELL BIOLOGY

ANATOMY AND CELL BIOLOGY (M.S. and Ph.D.) (http://bulletins.wayne.edu/graduate/school-medicine/programs/anatomy-cell-biology/anatomy-cell-biology-ms-phd)

ANA 6050 Biology of the Eye Cr. 3
Introduction to biology of eye structure/function, and to causes and clinical treatments of eye-related disorders and diseases. Offered for undergraduate credit only. Offered Yearly
Restriction(s): Enrollment is limited to Undergraduate level students.
Course Material Fees: $25
Equivalent: BIO 6055, PYC 6050

ANA 7010 Human Gross Anatomy Cr. 8
Lectures and dissection of limbs, back, thorax, abdomen, head and neck, pelvis and perineum. Written and practical examinations. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7030 Human Microscopic Anatomy Cr. 4
The microscopic structure of tissues and organs. Lectures and laboratory study. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology or Pathology; enrollment is limited to Graduate level students.

ANA 7055 Biology of the Eye Cr. 3
Integrated introduction to basic biological structure/function of the eye; causes and clinical treatments of eye-related disorders and diseases. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Medicine.
Equivalent: BIO 7055

ANA 7065 Mechanisms of Ocular Disease I Cr. 2
Lectures and readings on mechanisms and current treatments for diseases of the anterior segment of the eye. Offered Winter.
Prerequisite: ANA 7055 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ANA 7075 Mechanisms of Ocular Disease II Cr. 2
Lectures and readings on mechanisms and current treatments for diseases of the posterior segment of the eye. Offered Fall.
Prerequisite: ANA 7055 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
ANA 7080 Human Embryology Cr. 3
Study of experimental and human embryology; developmental processes, with particular reference to human embryology. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7130 Neuroanatomy Cr. 4
Lecture and laboratory study of the nervous system. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7260 Special Dissection Cr. 2-10
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 20 Credits

ANA 7270 Special Projects in Anatomy Cr. 2-10
Research rotations leading to selection of permanent advisor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7890 Seminar Cr. 1
Biweekly departmental seminar. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 4 Credits

ANA 7996 Research Cr. 1-15
Research under direction of permanent advisor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 30 Credits

ANA 8999 Master's Thesis Research and Direction Cr. 1-8
Original research leading to M.S. degree under Plan A. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ANA 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ANA 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment is limited to Graduate level students.

ANA 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ANA 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ANA 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ANA 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ANA 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ANA 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ANA 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Course Material Fees: $348.67
Repeatable for 0 Credits