

<b>Semester</b>	<b>Research Track</b>	<b>Clinical Anatomy (1 yr)</b>	<b>Notes</b>
<b>Fall Semester Year 1</b>	<ul style="list-style-type: none"> <li>• G715 Biomed Sci I (3)</li> <li>• G716 Biomed Sci II (3)</li> <li>• G717 Biomed Sci III (3)</li> </ul>	<ul style="list-style-type: none"> <li>• D502 Histology (4)</li> <li>• B500 Biochemistry (3)</li> <li>• Electives (3-6)</li> </ul>	Students in the Research Track are encouraged to begin their research project as soon as possible
<b>Spring Semester Year 1</b>	<ul style="list-style-type: none"> <li>• G817 Cell Biology (2)</li> <li>• D861 Seminar (1)</li> <li>• D860 Research (3)</li> <li>• Electives (0-3)</li> </ul>	<ul style="list-style-type: none"> <li>• D501 Gross Anatomy (5)</li> <li>• D527 Neuroanatomy (3)</li> <li>• D853 Develop Anatomy (3)</li> <li>• D861 Seminar (1)</li> <li>• Electives (0-3)</li> </ul>	D861 Seminar meets in both Fall and Spring semesters, but registration does not occur until Spring semester
<b>Summer Session Year 1</b>	<ul style="list-style-type: none"> <li>• D860 Research (3)</li> </ul>	<ul style="list-style-type: none"> <li>• D878 Anatomy Teaching (2)</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>• D700 Educ. Research (2)</li> <li>• Electives (0-3)</li> </ul>	
<b>Fall Semester Year 2</b>	<ul style="list-style-type: none"> <li>• G855 Biostatistics (1)</li> <li>• G505 Research Ethics (1)</li> <li>• D860 Research (3)</li> <li>• Electives (0-3)</li> </ul>	N/A	
<b>Spring Semester Year 2</b>	<ul style="list-style-type: none"> <li>• D861 Seminar (1)</li> <li>• D860 Research (3)</li> <li>• Electives (0-3)</li> </ul>	N/A	
<b>Summer Session Year 2</b>	<ul style="list-style-type: none"> <li>• D860 Research (0-3)</li> </ul>	N/A	
<b>Research Hours</b>	At least 12 hours of D860 Research required	No research hours required	The Research Track requires completion of laboratory research project; the Clinical Anatomy Track requires no research project.
<b>Electives (see list)</b>	Additional graduate-level courses, including at least 12 hours and not more than 15 hours of D860 Research	Additional graduate-level courses to complete 30 credit hour requirement	
<b>Total Credit Hours</b>	30	30	
<b>Final Project</b>	Thesis or paper about laboratory-based research	No final project required	
<b>Final Examination</b>	Oral, based on thesis or paper	No final exam required	
<b>Final Examination Committee</b>	Three members of ACB graduate faculty	No committee required	

**ELECTIVES:** These electives are from the IUSM IBMG modular curriculum, the Department of Cellular and Integrative Physiology, the MS/MS Academic program, and the IUPUI Master of Science Biology program. Topics courses as arranged by faculty will also be acceptable with prior approval from the ACB Graduate Studies Committee

**Annually (Fall)**

ANAT D700 Educational Research Practicum	(2cr)
ANAT D878 Anatomy Teaching Practicum	(2cr)
F503 Human Physiology	(5cr)
G716 Molecular Biology & Genetics	(3cr)
G831 Concepts & Controversies in Cardiovascular Physiology	(2cr)
BIOL 50700 Principles of Molecular Biology	(3cr)
BIOL 55600 Physiology I	(3cr)
BIOL 55900 Endocrinology	(3cr)
BIOL 56600 Developmental Biology	(3cr)
EDUC Y521 Methodological Approaches to Educational Inquiry	(3cr)

**Annually (Spring)**

ANAT D853 Human Developmental Anatomy	(3cr)
ANAT D700 Educational Research Practicum	(2cr)
ANAT D878 Anatomy Teaching Practicum	(2cr)
J510 Infectious Microbes and Host Interactions	(3cr)
G655 Research Communications Seminar	(1cr)
G720 Stem Cell Biology	(2cr)
G724 Molecular and Cancer Genetics	(2cr)
G725 Gene Therapy	(2cr)
G726 Developmental Genetics	(2cr)
G727 Animal Models of Human Disease	(2cr)
G728 Fundamental Concepts of Infection & Pathogenesis	(2cr)
G729 Introduction to Immunological Systems	(2cr)
G733 Introduction to Biological Microscopy	(2cr)
G735 Cardiovascular, Renal & Respiratory Physiology	(2cr)
G736 Endocrine & GI Function	(2cr)
G737 Introduction to Histology	(2cr)
G743 Fundamentals of Electrical Signaling & Ion Channel Biology	(2cr)
G744 Neuropharmacology of Synaptic Transmission: Receptors and Ligands	(2cr)
G745 Fundamentals of Intracellular Signal Transduction in Neurons	(2cr)
G747 Principles of Pharmacology	(2cr)
G748 Principles of Toxicology 1	(2cr)
G749 Introduction to Structural Biology	(2cr)

G751 Advanced Concepts in Cytosolic & Nuclear Signal Transduction	(2cr)
G754 Principles of Toxicology 2	(2cr)
G755 Principles of Toxicology 3	(2cr)
G761 Molecular Cell Physiology of Ion Channels	(2cr)
G807 Structural and Chemical Biology	(2cr)
G817 Molecular Basis of Cell Structure and Function	(2cr)
G852 Concepts of Cancer Biology	(2cr)
BIOL 51600 Molecular Biology of Cancer	(3cr)
BIOL 54000 Topics in Biotechnology	(3cr)
BIOL 55700 Physiology II	(3cr)
BIOL 56100 Immunology	(3cr)
BIOL 56400 Molecular Genetics	(3cr)
BIOL 55900 Endocrinology	(3cr)
BIOL 56800 Regenerative Biology & Medicine	(3cr)
BIOL 57100 Developmental Neurobiology	(3cr)

**Fall (Even Years)**

G830 Advanced Cardiovascular Physiology	(3cr)
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**Fall (Odd Years)**

G819 Basic Bone Biology	(3cr)
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**Spring (Even Years)**

G703 Physiology of Coronary Circulation	(1cr)
G713 Angiogenesis	(1cr)

**Spring (Odd Years)**

G706 Designer Microbes	(1cr)
G762 Renal Physiology	(1cr)
M620 Pedagogical Methods in the Health Sciences	(3cr)

**Summer (Even Years)**

ANAT D700 Educational Research Practicum	(2cr)
G707 Physiology of Smooth Muscle	(1cr)
G708 Cardiac & Coronary Physiology of Exercise	(1cr)

**Summer (Odd Years)**

ANAT D700 Educational Research Practicum	(2cr)
G704 Physiological Proteomic	(1cr)
G714 Development of Vascular System	(1cr)
G782 Physiology & Pathophysiology of Lipid Rafts	(1cr)

