



INDIANA UNIVERSITY

DEPARTMENT OF ANATOMY AND CELL BIOLOGY

School of Medicine

MEMORANDUM

DATE: 14 March 2014

TO: Sherry Queener, Associate Dean IU Graduate School

FROM: Kathryn Jones, Chair, Anatomy & Cell Biology (ACB)
Joseph Bidwell, Chair of ACB Graduate Studies Committee

RE: Revised Traditional Track 2-year Master's (MS) degree

We must modify our MS programs in response to the anticipated medical school curriculum changes. Most of our medical anatomy courses used as core requirements for our Traditional Track MS degree will be discontinued or revised for the new medical school curriculum making them unavailable or unsuitable for the MS pre-professional degree programs.

An outline and brief description of our current (approved) and proposed revised MS programs follow (see the Table for a summary of this information). Our previously **approved Traditional Track 2-year MS** program had at its core the three courses in anatomical sciences that we currently teach to the medical students. The student is assigned a mentor and committee to guide the student in a modest research project and in choosing their electives. Students from this MS program are typically successful in gaining admittance to medical and dental schools. For the **new Traditional Track 2-year program**, these courses will now be replaced with those offered in our MS/MS curriculum. The current Traditional Track 2-year MS program will continue to be offered until August 2015 when the new medical school curriculum is scheduled to begin. The new Traditional Track program will be offered concurrently upon approval of the Graduate School Committee, until August of 2015, after which it will supplant our current program.

Comparison of the original Traditional Track and new Traditional Track for earning the MS degree in Anatomy & Cell Biology

	Traditional Track 2 year (approved)	<u>New</u> Traditional Track 2 year
Fall semester	D850 Gross Anatomy (8 cr)	D527 Neuroanatomy (3) G855 Biostatistics (1)
Spring semester	D851 Histology (4) D861 Seminar (1) Electives*	D501 Gross Anatomy (5) D861 Seminar in Anatomy (1) Electives*
Summer semester	Electives*	Electives*
Fall semester 2	D852 Neuroscience and Clinical Neurology (5) G505 Responsible Conduct of Research (1) Electives*	D502 Histology (4) G505 Responsible Conduct of Research (1) Electives*
Spring semester	D861 Seminar (1) Electives*	D861 Seminar (1) Electives*
Total credit hours	30 credit hours	30 credit hours
Final project ¹	Paper; thesis optional	Paper; thesis optional
Final Exam	Oral, based on paper	Oral, based on paper
Committee	Three members of ACB graduate faculty	Three members of ACB graduate faculty
	*Electives: 10cr total	*Electives: 14cr total

1. The qualifiers exist because of our experience that some flexibility in closing out the degree is sometimes necessary. The research project is chosen by the student, mentor and committee and may be more suitable for a report/paper than a thesis. Our Graduate Studies Committee will decide the best option on a case-by-case basis.

***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)

F503	Human Physiology	(4 cr.)
G716	Molecular Biol & Genetics	(3 cr.)
G831	Conc. & Controver in Cardiovasc Physiol.	(2 cr.)
BIOL 50700	Principles of Molecular Biology	(3cr)
BIOL 55600	Physiology I	(3cr)
BIOL 55900	Endocrinology	(3cr)
BIOL 56600	Developmental Biology	(3cr)

Annually (Spring)

J510	Infectious Microbes and Host Interactions	(3cr)
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	Cardiovasc, Renal & Respir Physiol.	(2 cr.)
G736	Endocrine & GI Function	(2 cr.)
G737	Introduction to Histology	(2cr)
G743	Fundamentals of Electrical Signaling & Ion Channel Biology	(2 cr)
G744	Neuropharmacology of Synaptic Transmission: Receptors and Ligands	(2 cr)
G745	Fundamentals of Intracellular Signal Transduction in Neurons	(2 cr)
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	(2 cr)
G754	Principles of Toxicology 2	(2cr)
G755	Principles of Toxicology 3	(2cr)
G761	Mol Cell Physiol 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 56100	Immunology	(3cr)
BIOL 56400	Molecular Genetics	(3cr)
BIOL 55900	Endocrinology	(3cr)
BIOL 56800	Regenerative Biol & Medicine	(3cr)
BIOL 57100	Developmental Neurobiology	(3cr)

Spring 2012 (Even # Year)

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

Summer 2012 (Even # Year)

G707	Physiology of Smooth Muscle	(1 cr.)
G708	Cardiac & Cor Physiol of Exercise	(1 cr.)

Fall 2012 (Even # Year)

G830	Advanced Cardiovasc Physiol.	(3 cr.)
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Fall 2013 (Odd # Year)

G819	Basic Bone Biology.	(3 cr.)
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Spring 2013 (Odd # Year)

G706	Designer Mice	(1 cr.)
G762	Renal Physiology	(1 cr.)

Summer 2013 (Odd # Year)

G704	Physiological Proteomics	(1 cr.)
G714	Development of Vascular System	(1 cr.)
G782	Physiol & Pathophysiol of Lipid Rafts	(1 cr.)

To summarize, we have substituted our MS/MS anatomy courses for the soon to be discontinued medical anatomy courses currently offered for our **approved Traditional Track 2-year MS**. We submit this to you for your information, and for approval by the Graduate Affairs Committee.