## Ph.D. Minor in Diabetes and Obesity

A minimum of 12 credit hours beyond the requirements of the student's major PhD program. The Minor must include G805 Diabetes and Obesity and G505 Responsible Conduct of Research. If G805 has been taken to fulfill other requirements, it may be substituted by elective course(s) from the list below with the approval of the student's advisory committee.

The remainder of the Minor will be selected from the following courses:

G655 Research Communication Seminar (1 cr); G855 Experimental Design and Research Biostatistics (1 cr); G715 Biomedical Science I–Biochemical Basis of Biological Processes (3 cr); G716 Biomedical Science II–Molecular Biology and Genetics (3 cr); G717 Biomedical Science III-Cellular Basis of Systems Biology (3 cr); G805 Structural and Chemical Biology (2 cr); G817 Molecular Basis of Cell Structure and Function (2 cr); G825 Advanced Topics in Molecular Biology (2 cr); G848 Bioinformatics, Genomics, Proteomics and Systems Biology (2 cr); G852 Concepts of Cancer Biology: Signaling gone awry (2 cr) F782 Physiology and Pathology of Lipid Rafts (1 cr); G640 Epithelial Cell Biology (1 cr); G703 Physiology of the Coronary Circulation (1 cr); G704 Physiological Proteomics (1 cr); G706 Designer Mice (1 cr); G707 Physiology of Smooth Muscle (1 cr); G708 Cardiac and Coronary Physiology of Exercise (1 cr); G712 In Vivo Microcirculatory Physiology (1 cr); G713 Angiogenesis (1 cr); G736 Endocrine and Gastrointestinal Function in Health and Disease (1 cr); G761 Molecular and Cellular Physiology of Ion Channels Q580 Basic Human Genetics (3 cr); Q612 Molecular and Biochemical Genetics (3 cr); Q620 Human Cytogenetics (3 cr); Q630 Population Genetics (3 cr); G725 Gene Transfer Approaches to Clinical and Basic Research (Gene Therapy) (1 cr); G727 Animal Models of Human Disease (1 cr); J807 Current Topics in Immunity (2 cr); J829 Current Topics in Molecular Genetics of Microorganisms (2 cr); G720 Stem Cell Biology (2 cr); G728 Fundamentals of Infection and Pathogenesis (1 cr); G729 Immunology I: Introduction to the Immune System (1 cr); G747 Principle of Pharmacology (1 cr); G748 Principles of Toxicology 1 (1 cr); G748 Principles of Toxicology 2 (1 cr); G748 Principles of Toxicology 3 (1 cr); G745 Fundamentals of Intracellular Signal Transduction (2 cr);

G751 Advanced Concepts in Cytosolic and Nuclear Signal Transduction (2 cr);

The Minor program must be approved by the student's Advisory Committee, which will take into consideration the student's total didactic experience. In the case of combined M.D./Ph.D. students, the Committee may approve substitution of appropriate medical school courses. The minor representative on this Committee will be selected from outside the student's major department and must be a member of the Diabetes and Obesity Training Program.