

HUMAN GENETICS (HMGN)

HMGN 7010 Grand Rounds in Human Genetics (1)

This class meets weekly for one hour. Human Genetics faculty, other Tulane faculty and guests from other institutions, as well as graduate students, and medical residents are invited to speak on topics of interest. Topics include basic, applied, and clinical research and reviews to canvass the latest developments in the field of genetics.

Course Limit: 2

HMGN 7020 Intro to Human Genetics (3)

This class is an overview of basic disciplines and content areas within human genetics. The emphasis is clinical application of this knowledge within selected topic areas in biochemical, molecular, and population genetics as well as cytogenetics.

HMGN 7030 Clinical Aspects of Human Genetics I / Clinical Aspects of Human Genetics II (3)

This is a class taught by genetic counselors that reviews the clinical aspects of genetic disorders seen in clinic, and provides tools for assessing patients with these conditions. The class is meant to convey to the student the problems of diagnosing and managing genetic disease from the physician's and patient's standpoint. Students are also allowed to attend a limited number of genetics clinics as observers.

Course Limit: 2

HMGN 7040 Human Cytogenetics (3)

This course provides the student an overview of the field of cytogenetics. Topics include laboratory diagnostic procedures, mechanisms of chromosomal rearrangement, loss, and duplication, classical and recently described chromosomal abnormalities leading to disease, and molecular cytogenetics including fluorescent in situ hybridization techniques (FISH) and other molecular techniques.

HMGN 7050 Medical Biochemistry (3)

This course is an overview of genetic metabolic diseases. It concentrates on inborn errors of metabolism and lysosomal storage diseases. The student is presented with the clinical phenotypes, current methods of treatment, diagnostic procedures, and the biochemical defects resulting in the specific clinical presentation of selected metabolic diseases.

HMGN 7060 Human Mol. Genetics & Genomics (4)

This course will take a detailed look at molecular genetics in humans. It will cover the structure and organization of the human genome; DNA replication, DNA mutation and repair; current molecular techniques used in research; the details of gene expression including transcription, RNA processing, translation and how expression is regulated at the various levels; and the molecular basis of human disease.

Course Limit: 2

HMGN 7100 Population Genetics & Genetic Epidemiology (3)

This class will acquaint the student with the various theories and methods used in population genetics and genetic epidemiology. Topics include Hardy-Weinberg theory, Bayesian theory, forensics, paternity testing, segregation, linkage and association analyses.

HMGN 7950 Advanced Topics in Genomics (3)

This course focuses on teaching students to become proficient in reading, understanding and presenting published research. Students will be exposed to several important topics in the field of Medical Genetics and Genomics. Students will be required to read current literature articles related to these topics and present the findings to the class in the form of short presentations.

HMGN 7980 Special Topics (1-6)**HMGN 7990 Special Topics (1-6)****HMGN 9990 Dissertation Research (0)**

Course may be repeated up to unlimited credit hours.

Maximum Hours: 99