ME.110 (CELL BIOLOGY)

ME.110.301. Research in Cell Biology (Undergraduate). 1 Credit.
N/A

ME.110.302. Research Practicum. 0 Credits.
N/A

ME.110.699. Cell Biology Elective. 0 Credits.
For Medical Students only. Specialized Topics in Cell Biology. Refer to Medical Student Electives Book located at https://www.hopkinsmedicine.org/som/students/academics/electives.html.

ME.110.726. Nuclear Structure and Human Disease. 0 Credits.
This interactive class covers the 3D organization and dynamics of the cell nucleus and genome in health and disease. Topics include the nuclear envelope, lamina networks, nuclear pore complexes, nuclear import/export, LINC complexes, 3D chromosome organization, dynamic chromatin tethering, phase-partitioning, mitotic disassembly & reassembly of nuclear structure, and diseases (e.g., progeria, heart/muscle disease, brain disorders, metabolic disease) caused by mutations in nuclear lamina proteins. Students are expected to pre-watch lecture videos and come prepared for in-class discussion.

ME.110.727. The Cytoskeleton. 1 Credit.
The Cytoskeleton course addresses advanced topics in the mechanoochemical systems that govern and drive cell shape, tissue morphogenesis and integrity, mechanosensing, and the integration chemical signaling and mechanical inputs (force, stress, adhesion). These cellular systems are at the crux of healthy development and disease. We take a no-holds-barred approach in order to have advanced, in depth discussions of the topic. We will embrace molecular, biochemical, biophysical and computational logic and approaches in our thinking during the course.

ME.110.728. Cell Structure and Dynamics. 1.5 Credits.
The objective of this course is to provide the basics of cell biology, including the structure, function and biogenesis of cellular organelles. Also covered are essential concepts on the cytoskeleton, cell-cell and cell-extracellular matrix interactions, cell motility, chaperones, protein turnover and stem cells.

ME.110.730. Membrane Traffic. 0 Credits.

ME.110.731. Mammalian Histology. 0 Credits.

ME.110.732. Developmental Biology. 0 Credits.
Team-taught combined lecture and problem solving course designed to (1) impart the general molecular and cell biological principles that underlie embryonic development across a range of model organisms, (2) convey key experimental approaches and findings that have provided significant insight into the governing principles, and (3) expose students to enough descriptive embryology to allow them to comfortably read any paper in the field of developmental biology.

ME.110.733. Principles of Genetics. 2 Credits.
This module covers fundamental principles of genetics, focusing on eukaryotic model systems. Problem sets are an integral learning tool in this course. The course is taught by faculty from the Departments of Molecular Biology and Genetics, Biological Chemistry, Cell Biology, and Physiology. Students must enroll in the Q2 and Q3 sections of this course.

ME.110.800. Advanced Work and Research. 0 Credits.
Thesis Research