YEAR 1

FALL

12 credits

Required Core Courses:
- BMSC 8210 Genes to Cells (3)
- BMSC 8230 Molecular Basis of Human Disease (3)
- BMSC 8212 Systems Physiology (3)
- BMSC 8215 Lab Rotation (2)
- BMSC 8216 Scientific Writing (1)

Foundation Courses [recommended to select 2]

Students must take the Foundation Course that corresponds to their selected PhD program, and are encouraged to take a second foundation that will count as an elective.

SPRING

9 credits

CANC 8221 Basic Science of Oncology (3)
GENO 8231 Intro to Genomics, Proteomics & Bioinformatics (3)
MICR 8210 Infection & Immunity (3)
NRSC 8284 Foundations of Experimental Neuroscience I (3)
PHAR 6116 Pharmacogenetics & Personalized Medicine (3)

Electives [select 1-2]
ANAT 6160 Clinically Oriented Human Neuroanatomy (3)
BIOC 6240 Next Generation Sequencing (2)
Additional options possible with Program Director approval

SUMMER

3-6 credits

Required Core Courses: BMSC 8215 Lab Rotation (2)
BMSC 8218 Careers in Biomedical Sciences (1)
PHAR 8211 Physiology (3)

Select your PhD program and mentor

YEAR 2

FALL

9 credits

CANC 8222 Molecular Oncology & Cancer Epigenetics* (3)
GENO 6223 Bioinformatics* (2)
MICR 8230 Molecular & Cellular Immunology* (3)
Electives [select 2-3]
PHAR 6205 Pharmacology* (5)

Electives [select 1-2]
ANAT 6130 Clinically Oriented Human Embryology (3)
ANAT 6150 Clinically Oriented Human Microscopic Anatomy (4)
ANAT 6182 Fundamentals of Regenerative Biology and Systems Physiology (4)
ANAT 6275 Advanced Studies in Translational Sciences (3)
BIOC 6242 Bioscience Big Data Statistics (2)
GENO 6236 Medical Genomics (2)
MICR 6236 Fundamentals of Genomics I (3)
PUBH 6199 Microbiomes & Microbial Ecology (2)
PUBH 6276 Public Health Microbiology (3)
Courses marked with [*] above and required by one program can serve as electives for students in other programs
Additional options possible with Program Director approval

SPRING

9 credits

CANC 8223 Cancer Immunology* (3)
GENO 6237 Proteomics & Biomarkers* (2)
GENO 8232 Comp Bio & Bioinformatics* (3)
Electives [select 2-3]
Electives [select 1-2]

Electives [select 1-2]
ANAT 6160 Clinically Oriented Human Neuroanatomy (3)
BIOC 6240 Next Generation Sequencing (2)
BIOC 6281 Special Topics (1-2)
BIOC 6225 Metabolism (4)
BIOC 8232 Molecular & Cell Signaling (3)
BMSC 8219 Writing the Grant-Style Qualifier (2)
MICR 6237 Fundamentals of Genomics II (2)
MICR 6292 Tropical Infectious Disease (2)
MICR 8270 Advanced Topics in Immunology (3)
PHAR 6206 Adv Pharmacology (5)
PHAR 6322 Adv Professional & Comm Skills (3)
PUBH 6278 Virology (3)
PUBH 6861 Pub Health Genomics (3)
Courses marked with [*] above and required by one program can serve as electives for students in other programs
Additional options possible with Program Director approval

SUMMER

3 credits

BMSC 8220 Research Practicum (3)
Complete a grant-style qualifying exam

YEAR 3+

For the third and subsequent years (up through final dissertation defense) register for 3 credits of CANC / GENO / MICR / NRSC / PHAR 8999 (Dissertation Research) per semester. A total of 72 credit hours is required for the PhD degree.