

The following is a list of courses that have been pre-approved to fulfill the MCO Program elective requirement.

Note: If a course is grayed-out, it is not offered in the current academic year.

COURSE	TITLE	SEMESTER	
		Fall	Spr
APMTH 115	Mathematical Modeling		x
APMTH 226	Neural Computation		
BCMP 234	Cellular Metabolism and Human Disease		x
BCMP 236	Principles of Drug Action in People		x
BIOPHYS 170	Evolutionary and Quantitative Genomics		
BIOPHYS 205	Computational and Functional Genomics		x
BIOPHYS 242R	Special Topics in Biophysics		x
BIOSTAT 281	Genomic Data Manipulation		x
CELLBIO 207	Development, Stem Cells and Regeneration		x
CELLBIO 212	Biology of the Cancer Cell		
CHEM 110	The Chemistry and Biology of Therapeutics	x	
CHEM 161	Statistical Thermodynamics		x
CHEM 163	Frontiers in Biophysics	x	
CHEM 170	Chemical Biology	x	
COMPSCI 181	Machine Learning		x
ENG-SCI 120	Introduction to the Mechanics of Solids		x
ENG-SCI 222	Advanced Cellular Engineering	x	
GENETIC 201*	Principals of Genetics	x	
GENETIC 216*	Advanced Topics in Gene Expression		x
HBTM 200	Principles of Pathology		x
HEB 1410	Gut Microbiome & Human Health	x	
HEB 1600	Evolutionary Genetics of Complex Human Traits	x	
MATH 154	Probability Theory		x
MATH 242	Mathematical Biology-Evolutionary Dynamics	x	
MCB 105	Systems Neuroscience		x
MCB 125	Molecular Basis of Behavior		x
MCB 129	The Brain: Development, Plasticity and Decline	x	
MCB 131	Computational Neuroscience		
MCB 133	Unique Cells and Organisms		
MCB 143	Neurobiology of Vision and Blindness		x
MCB 145	Neurobiology of Perception & Decision Making	x	
MCB 146	Experience-Based Brain Development: Causes & Consequences		x
MCB 161	Introduction to Single-Molecule Biophysics	x	
MCB 165	Interplay Between Viruses and Their Hosts		
MCB 169	Molecular and Cellular Immunology	x	
MCB 170	Brain Invaders: Building and Breaking Barriers in the Nervous System		x
MCB 175	Principles of Cell Physiology	x	
MCB 188	Chromosomes		x
MCB 195	Foundations of Systems Biology and Biological Engineering		
MCB 198	Advanced Mathematical Techniques for Modern Biology	x	

COURSE	TITLE	SEMESTER	
		Fall	Spr
MCB 199	Statistical Thermodynamics & Quantitative Biology		
MCB 195	Foundations of Systems Biology and Biological Engineering		x
MCB 198	Advanced Mathematical Techniques for Modern Biology	x	
MCB 199	Statistical Thermodynamics & Quantitative Biology		x
MCB 231	Computational Neuroscience		x
MCB 294	Interesting Questions in Engineering and Physical Biology	x	
MICROBI 201	Molecular Biology of the Bacterial Cell		x
MICROBI 210	Microbial Sciences: Chemistry, Ecology, and Evolution		x
NEUROBIO 212	Mathematical Tools for Neuroscience	x	
OEB 106	Plant Development and Differentiation	x	
OEB 115	Evolutionary Developmental Biology in Animals		
OEB 125*	Molecular Ecology and Evolution	x	
OEB 145	Genes and Behavior	x	
OEB 223	Topics in Neurogenetics		x
OEB 253R	Evolutionary Genetics Seminar		x
OEB 275R*	Phylogenetics and Phylogeography in the Era of Genomics	x	
OEB 290	Microbial Sciences: Chemistry, Ecology and Evolution		x
SCRB 135	Reproductive Biology		x
SCRB 140*	Developmental and Molecular Basis of Growth and Regeneration		x
SCRB 145*	From Cells to Tissues, in Sickness and in Health	x	
SCRB 190	Understanding Aging	x	
SCRB 195	The Translational Science of Stem Cells	x	
SCRB 197	Frontiers in Therapeutics	x	
STAT 110	Introduction to Probability	x	
STAT 111	Introduction to Statistical Inference		x
STAT 215	Introduction to Computational Biology and Bioinformatics		x

List Updated: 8/22/2023

*Can be taken for EITHER elective OR GGE requirement (for 2023 incoming class)

If a course you are interested in is not listed, please email Lindsay or Vlad to request approval