

PMAE Master's Program Electives Courses		Offered in	
Computational Systems - Coding, AI, Software, Bioinformatics		Fall	Spring
BENG 5415	Practical Applications of Bioimaging & Biosensing	✓	
BENG 5450	Biomedical Image Processing & Analysis	✓	
BENG 5724	Topics in Computational & Systems Biology	✓	
BIS 555	Machine Learning with Biomedical Data	✓	
BIS 568	Applied Artificial Intelligence in Healthcare		
BIS 640	User-Centered Design of Digital Health Tools		
CB&B 5230	Biological Physics		✓
CB&B 5790	Distributed Artificial Intelligence on Biomedical Data	✓	
CB&B 5800	Bioinformatics Algorithms in Genomics	✓	
CB&B 5802	Applied Clinical & Operational Informatics	✓	
CB&B 6500	Quantitative Foundations for Human Genetics	✓	
CB&B 7141	AI, Medicine, and Society	✓	
CB&B 7400	Introduction to Health Informatics	✓	
CPSC 5700	Introduction to Artificial Intelligence	✓	
CPSC 5720	Intelligent Robotics	✓	
CPSC 5750	Computational Vision and Biological Perception	✓	
MCDB 5310	Modeling Biological Systems I	✓	
MCDB 5620	Modeling Biological Systems II		✓
S&DS 5650	Introductory Machine Learning (Fall or Spring)		✓
Physical Systems - CAD, Device Design/Prototyping/Testing, 3D Printing, Biomechanics			
ANTH 8513	Human Osteology (Fall or Spring)		✓
BENG 5410	Physical & Chemical Basis of Bioimaging & Biosensing	✓	
BENG 5415	Practical Applications of Bioimaging & Biosensing	✓	
BENG 5440	Fundamentals of Medical Imaging	✓	
BENG 5485	Fundamentals of Neuroimaging		✓
BENG 5550	Vascular Mechanics		✓
BENG 5570	Computational Mechanics		✓
CPSC 5720	Intelligent Robotics	✓	
ECE 8081	Electrochemical Energy Storage & Engineering		✓
ECE 9500	How to Wirelessly Sense Almost Anything	✓	
ECE 9511	Nanofabrication for Bioelectronic Devices		✓
ENAS 5390	Small Objects	✓	
MENG 5020	Mechatronics Laboratory		✓
MENG 5050	Computer-Aided Engineering (Fall or Spring)	✓	✓
MENG 5359	Neuromuscular Biomechanics	✓	
MENG 6278	Advanced Robotic Mechanisms	✓	
NURS 5110	Clinical Applications of Human Anatomy	✓	
Biological Systems - Biology, Tissue Engineering, Organoids, Biomaterials/Biofabrication, Regenerative Therapeutics			
BENG 5200	Physiological Systems	✓	
BENG 5270	Cellular & Molecular Physiology: Molecular Machines in Human Disease		✓
BENG 5340	Biomaterials	✓	
BENG 5350	Biomaterial-Tissue Interactions		✓
BENG 5560	Cellular & Molecular Physiology		✓
BENG 5611	BioMEMS & Biomedical Microdevices		

BENG 5630	Immunoengineering	✓	
BENG 5767	Systems Biology of Cell Signaling		✓
CB&B 6550	Stem Cells: Biology & Application	✓	
CDE 562	Nutrition & Chronic Disease		
CHEM 5210	Protein Design & Catalysis	✓	
CHEM 5240	Chemical Biology of Drug Discovery		
MB&B 5290	Structural Biology & Drug Discovery		✓
PATH 5650	Biology of Cancer		✓
PATH 5681	Advanced Topics in Cancer Biology	✓	
PHAR 5530	Targeted Use of Structural Biology of Drug Discovery		✓
PHAR 5500	Physiological Systems	✓	
PHAR 5504	Molecular Mechanisms of Drug Actions	✓	
PHAR 5538	Neuropharmacology		
PTB 5604	Physiologic Function & Cellular Structure of Organ Systems		✓
Clinical Translation Systems - Innovation/Implementation Skills, Entrepreneurship, Clinical Regulation, Commercialization			
BIS 640	User-Centered Design of Digital Health Tools		
HPM 588	Public Health Law	✓	
HPM 595	FDA Law		✓
MGT 631	Public Health Entrepreneurship & Intrapreneurship	✓	
MGT 654	Data-Driven Value Creation in Healthcare & Life Sciences		✓
MGT 657	Creating Healthcare & Life Science Ventures		
MGT 663	Innovation, Investments, & New Frontiers in Medicine	✓	
MGT 992	Health Care Strategy	✓	
PUBH 508	Foundations of Epidemiology & Public Health	✓	