

Projected BME depth elective course offering:

Biomedical Informatics and Systems modeling	Credits	Sp 2020	Su 2020	Fa 2020	Sp 2021	Su 2021	Fa 2021	Sp 2022
BMED 4477 Bio Networks & Genomics	3-0-0-3				X			X
BMED 4813 Biomed Health Info	3-0-0-3	X			X			X

[Biomaterials and Regenerative Technology](#)

BMED 4500 Cell & Tissue Engr Lab	1-0-6-3				X			
BMED 4751 Intro to Biomaterials	3-0-0-3	X		X	X			

[Biomedical Imaging and Instrumentation](#)

BMED 4750 Diag Imaging Physics	3-0-0-3		X*			X*		
BMED 4783 Intro Medical Image Proc	3-0-0-3				X			
BMED 4813 Medical Imaging Systems	3-0-0-3			X	X		X	
BMED 4823 Intro to Biomedical Optics	3-0-0-3			X				
BMED 4813 Quant Cellular Image Analysis	3-0-0-3			X			X	
BMED 4813 Optical Microscopy	3-0-0-3				X			

[Neuroengineering](#)

BMED 4784 - Engineering Electrophysiology	3-0-0-3							
BMED 4803 Intro Neuroengineering	3-0-0-3	X			X			X
BMED 4813 Systems Neuropathology and Translational Eng	3-0-0-3			X				

[Cellular Engineering and Mechanics](#)

BMED 4757 Biofluid Mechanics	3-0-0-3	X		X	X		X	X
BMED 4758 Biosolid Mechanics	3-0-0-3	X		X			X	
BMED 4803 Image-based Tissue Modeling	3-0-0-3						X	

[Physiology and Clinical Translation](#)

BMED 48x3 HealthReach	1-0-6-3	X		X				
BMED 4803 Global Health Engr	3-0-0-3	X	X*					
BMED 4803 Reg & Qual Issues Med Device Dev	3-0-0-3	X		X				
BMED 48x3 Engineering Physiology	3-0-0-3				X			
BMED 4823 FMDD	3-0-0-3						X	
BMED 48x3 Clin Observ Design Exp	1-0-6-3	X		X				

[Biomedical Robotics](#)

BMED 3801 Microcontroller	1-0-0-1							
BMED 3801 Solidworks CSWA	1-0-0-1	X			X			X
BMED 3801 CNC	1-0-0-1			X			X	
BMED 4739 Medical Robotics	3-0-0-3			X			X	
BMED 48X3 Mechatronics	3-0-0-3			X	X		X	X
BMED 48x3 Robotic Caregivers	3-0-0-3	X			X			X

*Depth electives offered in the summer will be in our NUIG summer study abroad program