## The University of Toledo Department of Bioengineering BSBE Elective Sequence Checkout Sheet

Student Name:	_ Entrance Date:	Rocket ID:
Prior to taking your first technical elective admitted during or after Fall 2017 are recomplete an elective track sequence. A telectives (15 hours) must be completed program requirements. This includes two which must be BIOE 4XXX level courses completion requirement, a minimum of the must be completed within the selected remaining two elective courses (6 hours within any of the track categories.  Student Signature:	equired to select and otal of five technical to satisfy the BSBE to technical electives. To satisfy the track track category. The strack category. The strack category becompleted.  Date:	Elective Track Selection (Check One)  □ Biochemical Engineering, Biofuels & Green Energy □ Device Design and Development □ Manufacturing and Quality Control □ Biomechanics □ Pre-Medicine □ Bioinstrumentation, Optics & Imaging □ Tissue Engineering □ Individualized (requires approval)
ADDSS Signature:	Date:	

Biochemica Energy	l Engineering, Biofuels & Green	Hours	Grade
BIOL 3010	Molecular Genetics	3	
BIOL 3030	Cell Biology	3	
CHEM 2410	Organic Chemistry I	3	
CHEM 2420	Organic Chemistry II	3	
CHEM 3510	Biochemistry I	3	
BIOE 4620	Biochemical Engineering	3	
BIOE 4630	Bioseparations	3	
CHEE 4010	Green Engineering Priciples	3	
CHEE 4120	Biofuels	3	
PHYS 4400	Principles & Varieties of Solar Energy	3	
Device Desi	gn and Development	Hours	Grade
BIOE 4110	Advanced Biomechanics	3	
BIOE 4320	Adv. Biomedical Quality Control	3	
BIOE 4610	Artificial Organs	3	
BIOE 4620	Biochemical Engineering	3	
BIOE 4710	Biomechanics Soft and Hard Tissue	3	
BIOE 4730	Computational Bioengineering	3	
BIOE 4740	Tissue Engineering	3	
BIOE 4750	Exp. Meth. in Orthopedic Biomech.	3	
BIOE 4980	Medical Internet of Things	3	
BIOE 4980	Advanced Biomaterials	3	
EECS 3100	Microsystems Design	3	
EECS 4170	Real Time Embedded System Design	3	

Pre-Medicii	ne	Hours	Grade
BIOL 3030	Cell Biology	3	
BIOL 3040	Cell Biology Laboratory	2	
BIOL 4250	Introduction to Neurobiology	3	
CHEM 2410	Organic Chemistry I	3	
CHEM 2420	Organic Chemistry II	3	
CHEM 2460	Organic Chem. Lab I	1	
CHEM 2470	Organic Chem. Lab II	1	
CHEM 3510	Biochemistry I	3	
BIOE 4200	Biosystems and Control	3	
BIOE 4720	Cellular Electrophysiology	3	
Bioinstrum	entation, Optics & Imaging	Hours	Grade
BIOL 4250	Introduction to Neurobiology	3	
EECS 3100	Microsystems Design	3	
EECS 3710	Electromagnetics I	3	
EECS 3720	Electromagnetics II	3	
EECS 4170	Real Time Embedded System Design	3	
PHYS 3310	Modern Physics	3	
PHYS 3400	Physical Prin of Energy Sources for Humans	3	
PHYS 3610	Optics & Lasers	3	
PHYS 4430	Medical Physics I	3	
PHYS 4440	Medical Physics II	3	
BIOE 4350	Biomedical Optics	3	
BIOE 4980	Medical Internet of Things	3	
BIOE 4640	Medical Imaging	3	
BIOE 4670	Ultrasound Principles	3	

Manufactur	ing and Quality Control	Hours	Grade
BIOE 4320	Adv Biomedical Quality Control	3	
MIME 2600	Engineering Economics	3	
MIME 2650	Manufacturing Process	3	
MIME 3300	Design and Analysis of Mechanical Systems	3	
MIME 3310	Mechanical Design I	3	
MIME 3320	Mechanical Design II	3	
BIOE 4980	Medical Internet of Things	3	
BIOE 4980	Additive Manufacturing	3	
BIOE 4980	Advanced Biomaterials	3	
Biomechanics		Hours	Grade
MIME 2300	Engineering Dynamics	3	
MIME 3300	Design and Analysis of Mechanical Systems	3	
BIOE 4110	Advanced Biomechanics	3	
BIOE 4710	Biomechanics Soft and Hard Tissue	3	
BIOE 4730	Computational Bioengineering	3	
BIOE 4750	Experimental Methods in Biomechanics	3	
BIOE 4980	Advanced Biomaterials	3	
BIOL 4250	Introduction to Neurobiology	3	

Tissue Engi	neering	Hours	Grade
BIOL 3030	Cell Biology	3	
BIOL 3010	Molecular Genetics	3	
BIOL 4050	Immunology	3	
BIOL 4250	Introduction to Neurobiology	3	
MIME 2650	Manufacturing Processes	3	
BIOE 4610	Applied Biotransport	3	
BIOE 4740	Tissue Engineering	3	
BIOE 4980	Artificial Organs	3	
BIOE 4980	Advanced Biomaterials	3	
Individualiz	Individualized (requires approval)		Grade