

2.1 Program of Study – Athens Campus

Students must earn a grade of "C" (2.0) or better in all courses and must maintain an overall GPA of >3.0.

YEAR ONE					
Fall Semester		Hours	Spring Semester		Hours
BCHE 6010	Bioengineering Fundamentals*	3	BCHE 6510	Biochemical Engineering	3
OR			BIOE 6780	Regulations and Ethics in BME	3
BCMB 6000	General Biochem & Mol. Bio [†]	3	PHAR 6120E	Process Control and Validation	3
BCHE 6030L	Bioprocess Technology	4			
PHAR 6030E	Current Good Manufacturing Practices	4			
Total Credit Hours		11	Total Credit Hours		9
Summer					
ENGR 7900	Graduate Internship	1			
Total Credit Hours		1			

YEAR TWO					
Fall Semester		Hours	Spring Semester		Hours
BCHE 6520	Biochemical Separations Proc	3	BCHE 8210	Fermentation Engineering Lab	3
	Science / Engineering Elective	3	BCHE 7010	Project-Focused Masters Research	2
	Science / Engineering Elective	3		Science / Engineering Elective	3
Total Credit Hours		9	Total Credit Hours		8

Science/Engineering Electives (select three of the following):

Track 1: Synthetic Biology		Track 2: Biopharmaceutical & Cell Manufacturing	
BCHE 6550	Bioprocess Des & Simulation (3)	BCHE 6600	Biopharmaceutical Engineering (3)
BCHE 6655	Metabolic Engineering & Syn Biol (3)	BCHE 6650	Animal Cell Biomanufacturing (3)
BCHE 6710	Bioelectrochemical Engineering (3)	BCHE 8980	Advanced Topics in BCHE (3)
BCHE 8150	Kinetics Reactor Design (3)	BCMB 8113	Adv Genetics Cell Bio Biochem 1a (2)
BCHE 8220	Adv. Metabolic Engineering & Syn Biol (3)	BCMB 8213	Adv Genetics Cell Bio Biochem II (2)
BCHE 8350	Sustainable Process Engineering (3)	BIOE 6625	Tissue Engineering (3)
BCHE 8610	Bioelectroanalytical Techniques (3)	BIOE 6740	Biomaterials (3)
BCHE 8980	Advanced Topics in BCHE (3)	BIOE 8240	Stem Cell Engineering (3)
ENGR 6490	Renewable Energy (3)	BIOE 8120	Regen Med, Cell Manufacturing & Society (3)
MIBO 6600L	Experimental Microbiology Lab (3)	PHAR 6010E	Intro Pharm, Biotech & Device Industries (4)
GENE 6520	Gene Industrial Micro Organism (3)	PHAR 6020E	Food and Drug Law (3)
GENE 8980	Prokaryotic Genetics (2)	PHAR 6100E	Quality Assurance (3)
		PHAR 6160E	Chemistry, Manufacturing & Controls (4)
		PHAR 7100E	Biostat App Pharm Biotech Ind

* Required for students with a non-engineering undergraduate degree.

† Required for students with a non-life science undergraduate degree.