MASTER OF SCIENCE IN BIOLOGICAL ENGINEERING

The objectives of this degree program are to prepare students for professional practice in any field of engineering involving biological processes and to provide a foundation in the fundamental knowledge of biological engineering. Candidates are required to take a total of 30 credit hours: nine credit hours of core courses, six credit hours of required biology courses, three credit hours of a required professional course, and 12 credit hours of electives.

Curriculum

Code	Title	Credit Hours
Core Courses		**(9)**
CHE 406	Transport Phenomena	3
CHE 503	Thermodynamics	3
CHE 577	Bioprocess Engineering	3
Biology Requirements		**(6)**
BIOL 504	Biochemistry	3
BIOL 515	Molecular Biology	3
Professional Requirement		**(3)**
CHE 506	Entrepreneurship and Intellectual Property Management	3
Electives		**(12)**
Select 12 credit hours from the following:		12
BME 525	Introduction to Medical Devices, BioMEMS and Microfluidics	3
BME 533	Biostatistics	3
CHE 545	Metabolic Engineering	3
CHE 580	Biomaterials	3
CHE 583	Pharmaceutical Engineering	3
CHE 584	Tissue Engineering	3
CHE 585	Drug Delivery	3
CHE 593	Seminar in Chemical Engineering	1
CHE 597	Special Problems	1-6
ENVE 513	Biotechnological Processes in Environmental Engineering	3
Select any 500-level Food Process Engineering course		3
Other approved electives from CHE, CHEM, BME, BIOL, including:		
Recommended		
CHE 593 Seminar in Chemical Engrng (or general seminars offered in energy and/or sustainability by WISER)		1
Total Credit Hours		**30**