

Bioproducts Engineering

Emphasis Electives- Need 6 credits

Course		Credits	Semester	Pre-reqs	Other info	Lib Ed
BBE 4302	Biodegradation of Bioproducts	3	Spring	BBE 1002 or instr consent		TS
BBE 4305	Pulp and Paper Techn.	3	Spring	Junior or senior or instr consent	Online	
BBE 4404	Biopolymers and Biocomposites Eng.	3	Fall	BBE/CSE upper division or instr consent		
BBE 4491	Senior Topics: Independent Study	1-4	F and S	Senior, and instr consent		
BBE 4723	Food Process Engineering	3	Spring	BBE 4013, or concurrent, upper div CSE, or instr consent		
BBE 4753	Air Quality and Pollution Control Eng.	3	Spring	BBE 3012, 3043, UD		
BBE 4733	Renewable Energy Technologies	3	Spring	Junior or senior		TS
CEGE 4502	Water and Wastewater Treatment	3	F and S	CEGE 3501 or CHEN 2001		
IE 5513	Engineering Safety	4	F and S	Upper div CSE, or grad student		
IE 5541	Project Management	4	F and S	Upper div CSE, or grad student		
SSM 4504W	Sustainable Products Systems Management	3	Spring	Junior or senior or instr consent		WI

Need to include at least one of the following: BBE 4404, BBE 4723, BBE 4733, BBE 4753, CEGE 4502, IE 5513

Technical Electives- Need 6 credits

Course		Credits	Semester	Pre-reqs	Other info	Lib Ed
BBE 3396	Industry Assignment	1	F and S	Permission number		
BBE 4608	Environmental and Industrial Microbiology	3	Fall	[BIOL 1001 or BIOL 1009], and CHEM 1011		
BBE 4900	Intern Reports	2	F and S, summer	CSE or CFANS student in BBE	Can be repeated	
BIOC 3021	Biochemistry	3	Fall Spring	[BIOC 2331 or CHEM 2301], [BIOL 1002 or BIOL 1009 or BIOL 2003]		
CHEM 2302	Organic Chemistry II	3	F,S, Sum	Grade of at least C- in CHEM 2301		
CHEM 2311	Organic Lab	4	F,S, Sum	C- in [CHEM 2302 or CHEM 2304], or concurrent registration		
CHEM 4214 MATS 4214 CHEN 4214	Polymers (cross listed class)	3	Spring	MATS 3011, and [CHEN 3101 or CHEN 4101 or MATS 4001], and or instr consent		
CHEM 4221	Introduction to Polymer Chemistry	3	Fall	[CHEM 2302 and CHEM 4501], or instr consent		
CHEM4222W MatS, 4222W CHEN 4223W	Polymer Laboratory (cross listed course)	2	Spring	CHEM 4221, or CHEM 4214, or CHEN 4214, or MATS 4214, or instr consent		WI
CHEM 4412	Chemical Biology of Enzymes	3	Spring	CHEM 2302 or equiv, and CHEM 4501		
IE 5551	Production Planning and Inventory Control	4	Fall Spring	upper div CSE, or grad student		
MATS 3801	Structural Characterization Lab	4	Fall	MATS 3011 and MatS upper div, or dept consent		
ME 4431W	Energy Conversion Systems Laboratory	4	Fall Spring	ME 3333, and ME 4031W, and [ME upper div or grad student]		

If Chem 2302 and Chem 2311 are selected, student can apply for chemistry minor