

Transfer Plan: NIC to UI
B.S. DEGREE PROGRAM IN BIOLOGICAL ENGINEERING – Catalog Year 2022/23
This plan assumes a student completes the Associate of Science degree at NIC before transferring to UI.

	Course Title/Requirement at NIC	COMMENTS	Credits
YEAR 1 FALL @ NIC			
CHEM 111/111 Lab	Principles of Chemistry I/111 Lab		5
ENGL 101	Writing and Rhetoric I		3
Wellness (GEM 7)	Wellness course	Required course in Engr AS Program of Study at NIC	1-3
MATH 170	Calculus I		4
ENGR 123	Introduction to Engineering	Substitute for BE 142	3
			16-18
YEAR 1 SPRING @ NIC			
ENGL 102	Writing and Rhetoric II		3
GEM 7F or 7I	First Year Experience or Inst. Designated		3
ENGR 210	Engineering Statics		3
MATH 175	Calculus II		4
CHEM 112/112 Lab	Principles of Chemistry II/112 Lab		5
			18
YEAR 2 FALL @ NIC			
COMM 101	Oral Communication		3
ECON 201 or 202	Economics course		3
MATH 275	Calculus III		4
ENGR 223	Engineering Analysis	Substitute for BE 242	3
PHYS 211/211 Lab	Engineering Physics I/Lab		5
			18
YEAR 2 SPRING @ NIC			
Phil 103	Intro to Ethics		3
CHEM 277	Organic Chemistry I		3
CHEM 278	Organic Chemistry I Lab		1
MATH 370	Intro to Ordinary Differential Equations		3
Phys 212/212 Lab	Engineering Physics II/Lab		5
BIOL 115/115 Lab	Cells & Evolution of Life	Not required for NIC AAS but needed for Biology Sequence at UI	4
			19
	Course Title/Requirement at UI	Prerequisites	Credits
YEAR 3 FALL @ UI			
BIOL 250	General Microbiology	BIOL 115/115L, CHEM 111/111L	3
BIOL 255	General Microbiology Lab		2
ENGR 335	Engineering Fluid Mechanics	MATH 275 and ENGR 210	3
ENGR 350	Mechanics of Materials	ENGR 210, MATH 175, MATH 310 as co-requisite	3
STAT 301	Probability and Statistics	MATH 175	3
Elective	Biological Engineering	BE 1/3	3
			17
YEAR 3 SPRING @ UI			
BE 361	Biotransport Processes	ENGR 320, ENGR 335	3
BE 462	Electric Power & Controls	ENGR 210; co-req MATH 310	3
ENGR 240	Intro to Electrical Circuits		
ENGR 320	Eng. Thermodynamics & Heat Transfer	ENGR 210, MATH 275	3
Elective	Technical Elective	TE 1/3	3
			15
YEAR 4 FALL @ UI			
BIOL 380	Biochemistry	CHEM 112/112L, CHEM 277	4
BE 441	Instrumentation & Measurements	ENGR 240; co-req STAT 301	3
BE 478	Engineering Design I	BE 242, ENGR 320, ENGR 335, ENGR 350	3
BE 491	Senior Seminar	Senior standing	1
Elective	Technical Elective	TE 2/3	3
Elective	Biological Engineering	BE 2/3	3
			14
YEAR 4 SPRING @ UI			
BE 461	Bioprocess Engineering	Permission	3
BE 479	Engineering Design II	BE 478	3
Elective	Technical Elective	TE 3/3	3
Elective	Biological Engineering	BE 3/3	3
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