Agricultural and Biosystems Engineering

Department Information

· Department Location:

Agricultural and Biosystems Engineering

· Department Phone:

701-231-7261

· Department Email:

ndsu.asm@ndsu.edu

· Department Web Site:

www.ndsu.edu/aben/ (http://www.ndsu.edu/aben/)

· Credential Offered:

B.S.A.B.En.

· Plan Of Study Sample:

catalog.ndsu.edu/programs-study/undergraduate/agricultural-biosystems-engineering/ (http://catalog.ndsu.edu/programs-study/undergraduate/agricultural-biosystems-engineering/)

Engineering Electives: Select 9 credits from the following: CE 310 Fluid Mechanics Laboratory CE 370 Introduction to Environmental Engineering CE 371 Environmental Engineering Laboratory CE 301 Electrical Engineering Laboratory CE 301 Electrical Engineering Laboratory CE 301 Mechanics of Materials ME 232 Mechanics of Materials ME 331 Materials Science and Engineering Chemistry Biological Science Electives: Select 6 credits from the following: 6 ANSC 357 Animal Genetics ANSC 465 Physiology of Reproduction BIOC 260 Elements of Biochemistry BIOC 461 Foundations of Biochemistry and Molecular Biology II BIOC 473 Methods of Biochemistry and Molecular Biology II BIOC 474 Methods of Recombinant DNA Technology BIOL 1501 General Biology I Laboratory BIOL 1501 General Biology II Laboratory BIOL 1511 General Biology II Laboratory BIOL 250 Human Anatomy and Physiology I BIOL 351 Genetics BIOL 364 General Ecology CFS 210 Introduction to Food Science and Technology CFS 370 Food Processing I CFS 450 Cereal Technology CFS 370 Food Processing I CHEM 341 Organic Chemistry I Laboratory CHEM 342 Organic Chemistry II Laboratory MICR 202 Introductory Microbiology MICR 2021 Introductory Microbiology Lab MICR 352 General Microbiology Lab II	Code	Title	Credits		
CE 370 Introduction to Environmental Engineering CE 371 Environmental Engineering Laboratory ECE 301 Electrical Engineering I ME 223 Mechanics of Materials ME 331 Materials Science and Engineering Chemistry/Biological Science Electives: Select 6 credits from the following: 6 ANSC 357 Animal Genetics ANSC 463 Physiology of Reproduction BIOC 260 Elements of Biochemistry BIOC 461 Foundations of Biochemistry and Molecular Biology II BIOC 473 Methods of Biochemical Research BIOC 474 Methods of Biochemical Research BIOC 150 General Biology II Laboratory BIOL 151 General Biology II Laboratory BIOL 151 General Biology II Laboratory BIOL 315 General Biology II Biochamistry BIOL 315 General Biology II Biochamistry BIOL 315 General Biology II Laboratory BIOL 315 General Coology CFS 210 Introduction to Food Science and Technology CFS 370 Food Processing I CFS 450 Cereal Technology CHEM 341 Organic Chemistry I CHEM 341 Organic Chemistry I Laboratory MICR 202 Introductory Microbiology MICR 360 General Microbiology Lab	Engineering Electives: Select 9 cre	Engineering Electives: Select 9 credits from the following:			
CE 371 Environmental Engineering Laboratory ECE 301 Electrical Engineering I ME 223 Mechanics of Materials ME 331 Materials Science and Engineering Chemistry/Biological Science Electives: Select 6 credits from the following: ANSC 357 Animal Genetics ANSC 357 Animal Genetics ANSC 463 Physiology of Reproduction BIOC 260 Elements of Biochemistry BIOC 461 Foundations of Biochemistry and Molecular Biology II BIOC 473 Methods of Biochemistry and Molecular Biology II BIOC 474 Methods of Recombinant DNA Technology BIOL 150L General Biology I Laboratory BIOL 151L General Biology II Laboratory BIOL 151L General Biology II Laboratory BIOL 315 Genetics BIOL 315 Genetics BIOL 315 Genetics BIOL 315 Genetics Laboratory BIOL 364 General Ecology CFS 210 Introduction to Food Science and Technology CFS 210 Introduction to Food Science and Technology CFS 370 Food Processing I CFS 450 Cereal Technology CHEM 341 Organic Chemistry I CHEM 341 Organic Chemistry I Laboratory MICR 362 Introductory Microbiology MICR 362 General Microbiology Lab MICR 360 General Microbiology Lab MICR 360 General Microbiology II	CE 310	Fluid Mechanics Laboratory			
ECE 301 Electrical Engineering I ME 223 Mechanics of Materials ME 331 Materials Science and Engineering Chemistry/Biological Science Electives: Select 6 credits from the following: 6 ANSC 357 Animal Genetics ANSC 463 Physiology of Reproduction BIOC 260 Elements of Biochemistry BIOC 461 Foundations of Biochemistry and Molecular Biology II BIOC 473 Methods of Biochemical Research BIOC 474 Methods of Recombinant DNA Technology BIOL 150L General Biology I Laboratory BIOL 151L General Biology I Laboratory BIOL 151L General Biology II Laboratory BIOL 220 Human Anatomy and Physiology I BIOL 315 Genetics BIOL 315 Genetics BIOL 315 Genetics BIOL 315 Genetics Laboratory BIOL 364 General Ecology CFS 210 Introduction to Food Science and Technology CFS 370 Food Processing I CFS 450 Cereal Technology CHEM 341 Organic Chemistry I CHEM 341L Organic Chemistry I Laboratory MICR 202 Introductory Microbiology MICR 362 General Microbiology Lab MICR 350 General Microbiology II	CE 370	Introduction to Environmental Engineering			
ME 223 Mechanics of Materials ME 331 Materials Science and Engineering Chemistry/Biological Science Electives: Select 6 credits from the following: ANSC 357 Animal Genetics ANSC 463 Physiology of Reproduction BIOC 260 Elements of Biochemistry BIOC 461 Foundations of Biochemistry and Molecular Biology II BIOC 473 Methods of Biochemistry and Molecular Biology II BIOC 474 Methods of Biochemistry Archnology BIOL 150L General Biology I Laboratory BIOL 151L General Biology II BIOL 151L General Biology II Laboratory BIOL 315 Genetics BIOL 315 Genetics BIOL 315 Genetics BIOL 344 General Ecology CFS 210 Introduction to Food Science and Technology CFS 210 Introduction to Food Science and Technology CFS 370 Food Processing I CFS 450 Cereal Technology CHEM 341 Organic Chemistry I CHEM 341 Organic Chemistry II CHEM 342 Organic Chemistry II Laboratory MICR 202 Introductory Microbiology MICR 202 Introductory Microbiology MICR 202 General Microbiology Lab MICR 350L General Microbiology II	CE 371	Environmental Engineering Laboratory			
Chemistry/Biological Science Electives: Select 6 credits from the following: ANSC 357 Animal Genetics ANSC 463 Physiology of Reproduction BIOC 260 Elements of Biochemistry BIOC 461 Foundations of Biochemistry and Molecular Biology II BIOC 473 Methods of Biochemical Research BIOC 474 Methods of Biochemical Posearch BIOL 150L General Biology I Laboratory BIOL 151 General Biology I Laboratory BIOL 151 General Biology II Laboratory BIOL 220 Human Anatomy and Physiology I BIOL 315 Genetics BIOL 315 Genetics BIOL 364 General Ecology CFS 210 Introduction to Food Science and Technology CFS 370 CFS 210 CFS 450 Cereal Technology CHEM 341 Organic Chemistry I CHEM 341 Organic Chemistry I Laboratory MICR 202 Introductory Microbiology MICR 350 General Microbiology Lab MICR 350 General Microbiology Lab MICR 350 General Microbiology II MICR 350 General Microbiology II	ECE 301	Electrical Engineering I			
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MICR 202 Introductory Microbiology MICR 202L Introductory Microbiology Lab MICR 350 General Microbiology MICR 350L General Microbiology Lab MICR 352 General Microbiology II	CHEM 342	Organic Chemistry II			
MICR 202L Introductory Microbiology Lab MICR 350 General Microbiology MICR 350L General Microbiology Lab MICR 352 General Microbiology II	CHEM 342L	Organic Chemistry II Laboratory			
MICR 350 General Microbiology MICR 350L General Microbiology Lab MICR 352 General Microbiology II	MICR 202	Introductory Microbiology			
MICR 350L General Microbiology Lab MICR 352 General Microbiology II	MICR 202L	Introductory Microbiology Lab			
MICR 352 General Microbiology II	MICR 350	General Microbiology			
	MICR 350L	General Microbiology Lab			
MICR 352L General Microbiology Lab II	MICR 352	General Microbiology II			
	MICR 352L	General Microbiology Lab II			

MICR 452 Microbial Ecology

Technical Electives: Select 6 cred	its from ABEN Electives, Engineering Electives, Chem/Bio Electives, or Computer Electives.	6	
ABEN 496 - Ag Tech Expo (1 add'l cr.) may be used as a Technical Elective. ABEN 496 - Field Exp./Internship, 1 cr., may be used as an ABEN Elective or as a Technical Elective. A maximum of two credits of ABEN 496 FE/Internship may be counted towards degree requirements.			
Computer Elective: Select 3 credits from the following:		3	
CE 212	Civil Engineering Graphic Communications		
CSCI 122	Visual BASIC		
CSCI 160	Computer Science I		
ECE 173	Introduction to Computing		
GEOG 455	Introduction to Geographic Information Systems		
IME 380	CAD/CAM for Manufacturing		
ME 212	Fundamentals of Visual Communication for Engineers		
ME 213	Modeling of Engineering Systems		

Total Credits 24