AGRICULTURAL BIOLOGY (APPLIED MICROBIOLOGY) - BACHELOR OF SCIENCE IN AGRICULTURE

The agricultural biology course work prepares you for a variety of careers in the biological sciences and agriculture. You will develop your curriculum with an academic advisor to attain your individual goals. Many will pursue advanced degrees in the sciences or prepare for admittance to professional schools (medical, dental, etc.). A diverse program is offered with five separate concentrations that allow you to tailor your program for careers in the commercial sector, such as agricultural consulting, and pest management or for careers with county, state, or federal agencies, such as research technicians, land managers, and extension agents. A minimum of 120 credit hours is required for graduation. Any undergraduate student majoring in Agricultural Biology must earn a grade of C- or higher in core (EPWS prefix) courses to satisfy degree requirements. Students earning a D or F in a core (EPWS prefix) course will be expected to repeat that course until the student earns a grade of C- or higher. The following courses are required for a major in Agricultural Biology.

The Applied Microbiology biotin prepare you for professional positions in algal biofuels, environmental monitoring and improvement, industrial applications of microbiology, food sanitation, research or graduate study.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
Area I: Communications		
English Composition - Level 1		
ENGL 1110G	Composition I	4
English Composition - Level 2		
Choose one from the following:		3
ENGL 2215G	Advanced Technical and Professional Communication	
ENGL 2210G	Professional and Technical Communication Honors	
ENGL 2210H	Professional and Technical Communication Honors	
ENGL 2130G	Advanced Composition	
Oral Communication		
Choose one from the following:		3
ACOM 1130G	Effective Leadership and Communication in Agriculture	
COMM 1115G	Introduction to Communication	
COMM 1130G	Public Speaking	
Area II: Mathematics		
MATH 1220G	College Algebra [1]	3
Area III/IV: Laboratory Sciences and Social/Behavioral Sciences		*11*
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	
Area IV: Social/Behavioral Sciences Course (3 credits) [2]		
Area V: Humanities [2]		*3*
Area VI: Creative and Fine Arts [2]		*3*
General Education Elective		
BIOL 2610G	Principles of Biology: Biodiversity, Ecology, and Evolution	3
Viewing a Wider World [3]		**6**
One must be from outside of the College of ACES		
Departmental/College Requirements		
CHEM 1216G, CHEM 1226G and BIOL 2610G will count towards Departmental/College and General Education Requirements		
A ST 311	Statistical Applications	3
AGRO 305	Principles of Genetics	3
BIOL 2110G	Principles of Biology: Cellular and Molecular Biology	3
BIOL 311	General Microbiology	3
BIOL 313	Structure and Function of Plants	3
or BIOL 322	Zoology	
EPWS 1110	Applied Biology	3
EPWS 1110L	Applied Biology Lab	1
EPWS 301	Agricultural Biotechnology	3
EPWS 302	General Entomology	4
EPWS 310	Plant Pathology	4
EPWS 311	Introduction to Weed Science	4
EPWS 447	Seminar	1
Concentration Coursework		
BIOL 311 L	General Microbiology Laboratory	2
BCHE 395	Biochemistry I	3
BIOL 451	Physiology of Microorganisms	3
BIOL 473	Ecology of Microorganisms	3
CHEM 313	Organic Chemistry I	3
CHEM 314	Organic Chemistry II	3
CHEM 315	Organic Chemistry Laboratory	2
EPWS 373	Fungal Biology	3
EPWS 420	Environmental Behavior of Pesticides	3
EPWS 486	Plant Virology	3
MATH 1430G	Applications of Calculus I	3
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab	4
Select 6-7 credits from the following:		6-7
AGRO 471	Plant Mineral Nutrition	
BIOL 477	Applied and Environmental Microbiology	
ENVS 301	Principles of Ecology	
ENVS 370	Environmental Soil Science	
EPWS 455	Advanced Integrated Pest Management	
EPWS 462	Parasitology	
EPWS 492	Diagnosing Plant Disorders	
FSTE 4110	Food Microbiology	
SOIL 2110	Introduction to Soil Science	
SOIL 312	Soil Management and Fertility	
SOIL 476	Soil Microbiology	
TOX 361	Basic Toxicology	
Second Language: (not required)		

Electives, to bring the total credits to 120 [4]	**4-5**
Total Credits	**120**

1. MATH 1220G College Algebra is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G College Algebra first.
2. See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses
3. See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses
4. Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor