



Biotechnology

Agronomy, AAS

The Biotechnology Associate in Applied Sciences (AAS) degree has four areas of concentration: Agronomy Concentration, Biomass Concentration, Animal Science Concentration and Greenhouse Production Concentration.

The Biotechnology—Agronomy Concentration AAS degree is designed to prepare students to work in biotechnology laboratories, production agriculture or find employment as a farm management specialist. Upon successful completion, students will be able to formulate fertilizers and identify weeds, insects and soil nutrient deficiencies, as well as conduct laboratory testing and research. Marketing skills will be enhanced through the application of enterprise analysis and current commodity management tools. Graduates may work in entry-level jobs as an agronomist; within the seed, chemical, banking and commodity brokerage industry and as laboratory technicians in the areas of agronomy research, product development, quality control, testing and environmental practices.

The degree is structured to allow students to develop marketable job skills while incorporating the requirements for an Associate in Applied Sciences degree. The program includes many hands-on and lab-based courses, which enable students to apply what they learn in biology, microbiology, horticulture, genetics, chemistry, statistics and molecular biology. Specific skills such as written and oral communications, critical thinking, problem solving, computer skills and small group collaboration are an integral part of the program. Students participate in internships in cooperation with potential employers.

Students start Fall or Spring semester.

biotech.dmacc.edu
800-362 2127

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Program Entry Requirements

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1. Complete an application for admission to the Biotechnology Program.
2. Satisfy the assessment requirement.
3. Attend any required information/registration session.
4. Must submit proof of one year of high school chemistry or
Academic Achievement Chemistry I & II or successful completion of CHM 122.
5. Must submit proof of two years of high school algebra or MAT 063 & MAT 073.
6. Demonstrate satisfactory writing skills on college entrance or assessment exam.

Location: Ankeny (Selected courses in this program are offered at other campuses.)

Graduation Requirements

To earn a Biotechnology AAS degree, a student must be accepted into the Biotechnology Program, complete all coursework as prescribed and maintain a 2.0 grade point average.

To complete this program, you must meet the Diversity Requirement with a grade of “C” or higher. See the AAS section of the catalog for more information about which courses can count toward this requirement.

Requirements for the Agronomy AAS Degree

SEMESTER 1 (FALL)

- ▶ SDV 108.....The College Experience Credits: 1
- ▶ ENG 105.....Composition I Credits: 3
- ▶ BIO 112.....General Biology I Credits: 4
- ▶ AGA 114.....Principles of Agronomy..... Credits: 3
- ▶ AGA 154.....Fundamentals of Soil Science..... Credits: 3
- ▶ AGA 157.....Soil Fertility..... Credits: 1

SEMESTER 2 (SPRING)

- ▶ BIO 113.....General Biology II Credits: 4
- ▶ AGA 211.....Grain & Forage Crops Credits: 3
- ▶ AGB 235.....Intro to Ag Markets..... Credits: 3

Option 1—Select 1 course

- ▶ CHM 122*.....Intro to General Chemistry..... Credits: 4
- ▶ CHM 165.....General/Inorganic Chemistry I..... Credits: 4

SEMESTER 3 (SUMMER)

- ▶ MAT 157.....Statistics..... Credits: 4
- ▶ BIO 186.....Microbiology Credits: 4
- ▶ AGA 381.....Crop Scouting..... Credits: 3
- ▶ AGP 333.....Precision Ag Applications..... Credits: 3

SEMESTER 4 (FALL)

- ▶ AAS Core Social and Behavioral
Science/Humanities course..... Credits: 3
- ▶ ENG 106.....Composition II..... Credits: 3
- ▶ BIO 146.....Genetics Credits: 3

Option 2—Select 1 course

- ▶ CHM 132*.....Intro to Organic/Biochemistry Credits: 4
- ▶ CHM 175.....General/Inorganic Chemistry II..... Credits: 4

SEMESTER 5 (SPRING)

- ▶ BIO 250.....Cell & Molecular Bio-Nucleic Acids Credits: 5
- ▶ BIO 251.....Cell & Molecular Bio-Proteins..... Credits: 5
- ▶ AGA 284.....Pesticide App cert..... Credits: 3
- ▶ BIO 249.....Biotechnology Internship..... Credits: 2–3

TOTAL CREDITS REQUIRED TO COMPLETE THIS AAS DEGREE 71

Note: Graduates of the Biotechnology—Agronomy AAS degree also qualify to be awarded the Agri-Business Agronomy Certificate and the Biotechnology Laboratory Methods Certificate.

* Students planning to transfer to a four-year program after completion of this degree should take CHM 165 and 175 instead of CHM 122 and 132.

Biomass concentration option is also available in semesters with a student cohort large enough to offer the specialized courses.

For more information, contact

Julie González, Program Chair/Biology Instructor

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For more information about DMACC graduation rates, the median debt of students who completed the program and other important information, please visit our website at www.dmacc.edu/gainfulemployment.

Nondiscrimination Policy: Des Moines Area Community College shall not engage in or allow discrimination covered by law. This includes harassment based on race, color, national origin, creed, religion, sex (including pregnancy and marital status), sexual orientation, gender identity, age, disability and genetic information. Veteran status in educational programs, activities, employment practices, or admission procedures is also included to the extent covered by law. Individuals who believe they have been discriminated against may file a complaint through the College Discrimination Complaint Procedure (ES4645). Complaint forms may be obtained from the Campus Provost's office, the Academic Dean's office, the Judicial Officer, or the EEO/AA Officer, Human Resources. For requests for accommodations, the Accommodation/Section 504/ADA Coordinator can be contacted at 515-964-6857. For Title IX questions and concerns, contact 515-964-6850.

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