

Agriculture Science

Course Outline

Course Information

Instructor: Ben Wise, Agricultural Education

Prerequisite: None

Course Length: 1 Semester/86 Hours

Credit Available: 0.5 Credits

Technical Requirements: <https://www.blueskyschool.org/about/tech-requirements/>

Required Materials: Indoor or outdoor plant, camera, headset, speakers, microphone, mouse, keyboard, notebook, and pens/pencils.

Instructional Methods: Asynchronous

Required Course Assessments: Students must master the mandated skills based on Minnesota or local Standards-aligned assignments to fulfill course requirements.

Final Exam: The final exam is scheduled based on your course enrollment duration.

Extra Credit: This course does not offer extra credit.

Local Course Code: SCI099080

Course Description

The word “agriculture” often evokes images of farms, fields, and livestock, and while all of these representations are correct and essential, the field of Agriculture is so much more! In Agriscience I: Introduction, you’ll explore how agriscientists play key roles in improving agriculture, food production, and the conservation of natural resources along with the technologies used to keep the field thriving. Are you ready to explore the diverse careers in agriscience and how you can prepare to positively impact the planet? Let’s get growing!

Topics Outline

- Unit 1: The Importance of Agriscience
- Unit 2: Agriscience and the Environment
- Unit 3: Plant Science
- Unit 4: The Animal Element
- Unit 5: Animal Biology and Pest Control
- Unit 6: Technology and Agriscience
- Unit 7: Careers in Agriscience

- Unit 8: Agribusiness Management

Course Objectives

Unit 1: The Importance of Agriscience

- Explain how the history of agriculture has influenced the development of cities and economies
- Analyze the variables impacting imports and exports
- Determine the relationship between agriculture and society at the local, state, national, and international levels
- Evaluate the reliability of a website and recognize those websites that are appropriate for use in agriscience
- Formulate a business email and write with appropriate business etiquette

Unit 2: Agriscience and the Environment

- Explain the relationship between agriscience and the environment
- Identify threats to a healthy environment
- Compare and contrast practices for conserving renewable and nonrenewable resources
- Describe how natural resources are used in agriculture
- Demonstrate effective communication skills

Unit 3: Plant Science

- Investigate the many uses for plants in industry and medicine, in making our lives more beautiful, and as food products
- Identify the major parts of plants and state the important functions of each
- Compare the cell structure and function of plants, animals, bacteria, and viruses
- Apply the different types of soil classification
- Analyze complex problems by using critical-thinking skills

Unit 4: The Animal Element

- Differentiate between domestication and natural selection
- Compare the economic importance of different livestock animals with their byproducts
- Analyze the basic nutritional needs of animals and explain the different types of digestion in livestock
- Apply ethical concepts to assess the appropriateness of the treatment of animals in agriculture and apply ethics to workplace situations

Unit 5: Animal Biology and Pest Control

- Compare the anatomical features and growth patterns of various domesticated animals
- Assess the probability of certain traits appearing in the offspring of animals
- Investigate the possible control measures for various agricultural pests
- Evaluate the dangers in agricultural workplaces to formulate plans to mitigate risks

Unit 6: Technology and Agriscience

- Describe advances in agricultural technology and how they may change food production and distribution
- Investigate careers in agriscience alongside each step in the food system
- Compare consumer concerns over food safety to the available science, considering ways to communicate the findings to a consumer audience
- Create a recordkeeping system for financial and production records that will allow a farmer to interpret data to apply to improvements on the farm

Unit 7: Careers in Agriscience

- Hypothesize how agriscience advances could help farmers beyond North America to feed the populations in their regions
- Compare the working environment, needed skills, and educational requirements for various agriscience careers
- Differentiate among the types of tools and equipment used in agriculture and consider the appropriate safety measures and personal protective equipment needed to operate them
- Create a set of SMART goals that includes education and experience you will need to prepare for a career that interests and inspires you

Unit 8: Agribusiness Management

- Analyze pricing trends in agricultural products based on the principles of supply and demand
- Compare livestock and crop market structures to assess the pros and cons of each type of farming business
- Connect the trends in food production and consumption in the United States to the impact that these trends may have on health, safety, the environment, and the world food supply
- Create a strategic plan to participate in agricultural, scientific, and community programs that will help to develop leadership skills

Assessment of Student Work

Students will utilize the todo list on the course tile to determine when assignments should be completed.

Grading Scale

A	93% +
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%

C-	70-72%
D+	67-69%
D	63-66%
D-	60-62%
F	59% and below

Academic Integrity

ACADEMIC HONESTY: Students must always submit work that represents original work, words, or ideas. If any words or ideas are used that do not represent origination from an individual student, the student must cite all relevant sources. The student should also document the extent to which such sources were used. Words or ideas that require citation include, but are not limited to, all hard copies or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such communication clearly originates from an identifiable source. In the online course, all submissions to any public meeting or private mailbox fall within the scope of words and ideas that require citations if used by someone other than the original author.

Academic dishonesty in an online learning environment could involve:

- Having a tutor or friend complete a portion of your assignments
- Having a reviewer make extensive revisions to an assignment
- Copying work submitted by another student to a public class meeting
- Using information from online information services without proper citation
- Using artificial intelligence to compose responses for short answer questions, essays, and papers

PLAGIARISM: Plagiarism refers to the practice of taking words or ideas from someone else and representing them as your own. Plagiarism occurs most frequently in the adult world when someone takes a story or story idea from someone else and tries to use it as his or her own. In recent years, there have been famous cases where newspaper reporters and college professors have been fired when it was learned that they had used material from other sources without permission or without identifying the source.

In online education, the most common kinds of plagiarism occur when students copy materials from another source, often an online source, and submit it as their own work. Sometimes two students who know each other will copy work from one to the other. In either case, the students are cheating, and there will be penalties for it.

PENALTIES: Individual teachers may choose to have their own systems, but students caught using any form of plagiarism can generally expect to receive at minimum a zero on the assignment. An individual teacher may use more severe penalties.

Student Expectations

Teacher Contact Time

All students: Students are expected to have direct contact with the teacher a minimum of three times per term or as requested by the teacher. Teachers are typically available from 9-3 on school days. Appointments may be requested outside these hours.

Group Pace Students: In addition to the expectation for all students, students in a Group Pace section are expected to attend and participate in weekly live sessions.

Academic Support & Communication

Students will be contacted periodically by the instructor and are expected to return any voice messages, emails, or text messages sent by the instructor. Check your email and return messages EVERY DAY. This is a responsibility of all BlueSky students. Please also read all course announcements, as these are frequently used methods of general communication from the teacher to the students. Parents/guardians will be contacted as necessary.

If, at any time, a student or parent/guardian has a question, comment, concern about the class or would simply like help on an assignment, please contact the instructor directly.

Attendance

All students: Absences must be reported the day of the event. If you are sick today, you must call in and let us know today. Report the absence on the attendance line 651-202-2020 on or before 4 pm the day the absence occurs. If you call in a day or week later, it won't count as an absence. To get an absence excused a parent or guardian must contact the BlueSky Online School Office. Only students 18 years or older may call the attendance line themselves.

Full time students: Attendance is measured by assignments submitted during a school week. 15 assignments must be submitted during the school week. Every 3 assignments submitted counts as 1 day in attendance for that week.

Supplemental students: Supplemental students are expected to work each week in his/her online course(s). The student is to follow the Academic Snapshot that outlines the number of assignments to be completed weekly.

If a supplemental student does not submit an online assignment for 15 consecutive school days, the student will be dropped from BlueSky's supplemental program due to lack of engagement .

Supplemental-Specific Information

BlueSky will communicate with students' counselors regarding course registration. The communication will include: course(s) of interest, course syllabus/syllabi, BlueSky's engagement policy.

- a. Bluesky will provide progress reports to district contacts twice monthly. District contacts are encouraged to reach out to BlueSky's Supplemental Program Coordinator at any time with questions or concerns regarding student progress or updates.
- b. BlueSky will submit transcripts to district contacts within 1 week of course completion.

NCAA Specific Information

In addition to the expectation for all students, students taking the course for NCAA eligibility are expected to:

- Demonstrate understanding of course concepts in weekly synchronous sessions directed by the course instructor. These sessions are designed to address content standards.
- Attend at least 80% of scheduled synchronous sessions to meet NCAA eligibility requirements.
- Follow the academic snapshot recommended pacing.
- Follow the school semester schedule for term start and end dates (no flex courses).

If the student does not meet the above requirements but receives a passing course grade, they will receive BlueSky course credit but their efforts may not meet NCAA eligibility requirements. NCAA will make final determinations.