Food Science and Safety is a specialization course in the CASE Program of Study. Students will complete hands-on activities, projects, and problems that simulate actual concepts and situations found in the food science and safety industry, allowing students to build content knowledge and technical skills. Students will investigate areas of food science including food safety, food chemistry, food processing, food product development, and marketing.

Students will maintain a research level Laboratory Notebook throughout the course documenting their experiences in the laboratory. Research and experimental design will be highlighted as students develop and conduct industry appropriate investigations.

In addition, students will explore connections between the Food Science and Safety lessons, Supervised Agricultural Experience, and FFA components that are important for the development of an informed agricultural education student. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating solutions to their peers and members of the professional community.

Food Science and Safety includes the following units of study.

- Introduction to Food Science
- Chemistry of Food
- Safety of Our Food
- Food Processing Preservation and Packaging
- Food Health and Security
- Preference and Product Availability
- Food Product Development

Prerequisites

Due to the pace and rigor of the course, certain prerequisites are necessary for student success. The preferred method of student acceptance into *Food Science and Safety* is through a CASE Sequence of Courses. Students should take *Introduction to AFNR* followed by either *Principles of Agricultural Science – Animal* or *Principles of Agricultural Science – Plant* prior to registering for this course.

An alternative route could be Biology, Chemistry, foundational agricultural science for plants and animals and a strong background in student-directed, project-, and inquiry-based learning.