

## Course Description

The *Agricultural Research and Development (ARD)* course is the capstone designed to culminate students' experiences in agriculture, based on the pathway of study they pursued. Woven throughout the course are projects and problems based in practical applications and designed to develop and improve employability skills of students. Students will further enhance research, critical thinking, and teamwork skills as they expand on content knowledge from previous CASE courses. Students will work to solve complex, real-world problems through a focused research project. This process will include conducting research, data analysis and communication, and the development of new products.

Students will understand specific connections between the course's lesson and Supervised Agricultural Experience and FFA components of agricultural education programs. Students will improve investigative, experimental and communication skills. As a result of the course, students will develop skills in scientific communications about problems, research, and solutions.

The ARD course follows each of the five CASE specialization courses (Animal and Plant Biotechnology, Food Science and Safety, Mechanical Systems in Agriculture, Environmental Science Issues, or Agricultural Marketing and Communications) included in the CASE Program of Study Pathways. The knowledge and skills students develop will be valuable for college and career aspirations.

Students completing coursework for all four courses within a specific CASE Pathway are eligible to receive CASE program certification.

The ARD course includes the following units of study:

- Defining Agricultural Research and Development
- Problems and Solutions
- Methodology
- Collecting and Analyzing Data
- Communicating Results