

## Animal and Plant Biotechnology Course Description

*Animal and Plant Biotechnology*, a specialization course in the CASE Program of Study, provides students with experiences in industry appropriate applications of biotechnology related to plant and animal agriculture. Students will complete hands-on activities, projects, and problems designed to build content knowledge and technical skills in the field of biotechnology. Students are expected to become proficient at biotechnological skills involving micropipetting, bacterial cultures and transformations, electrophoresis, and polymerase chain reaction.

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.

Students will develop and conduct a research project following the National FFA Agriscience Fair guidelines. From background research through data collection and analysis, students will investigate a problem of their choice and conclude the project by reporting their results in the forms of a research paper and a research poster.

*Animal and Plant Biotechnology* includes the following units of study:

- Introduction to Biotechnology
- DNA Technologies
- Proteins
- Agricultural Biotechnology
- Research Methods