



OFFERED SPRING 2022
AGRO 429/829
Plant Biotechnology
Applications

3 Credits

Recitation#1: M, 10:00 am-10:50 am

Recitation#1: W, 10:00 am-10:50 am

Lab#1: F, 10:00 am-12:30 pm

Location: Beadle N102

Instructors: Prof. Marc Libault, Dept. of Agronomy and Horticulture

Plant Biotechnology is an exciting field that is constantly changing and developing. The study of plant biology at a molecular and cellular level has resulted in fascinating discoveries that influence current research and our lives daily. The goal of this course is to introduce you to plant biotechnologies, and their applications to answer biological questions. In this class, you will also develop critical thinking and improved writing and thinking skills with a working knowledge of plant biology and biotechnology.

During this semester, you will work on various biotechnological techniques including:

- Develop a cloning strategy to study plant gene function;
- Mine -omic databases to identify genes of interest, utilize bioinformatics databases, and analyze DNA sequences using bioinformatics tools;
- Quantify and estimate the quality of your nucleic acid samples;
- Immuno-detect recombinant proteins;
- Analyze gene transcriptional activity at the level of plant organ, tissue and single-cells;
- Observe the subcellular localization of your proteins using epifluorescent microscopes;
- Enhance your science writing and data analysis skills.

Learning will be assessed based on problem sets and writing assignments/participation, formal lab reports, short and long answer-based final. Enrollment cap: 24

Prerequisites: upon faculty permission.

Questions: marc.libault@unl.edu, Beadle N305, 2-4530