# **BIO 541 AGRICULTURAL BIOTECHNOLOGY**

**FALL 2021**

* Week 1. Agricultural R&D, Productivity and Global Food Prospects
* Week 2. Farming Systems, Productivity and Sustainability of Crop Production
* Week 3. The Molecular Basis of Genetic Manipulation and Improvement of Crops
* Week 4. Plants in Human Nutrition and Animal Feed
* Week 5. The Genetic Basis of Plant Growth and Development
* Week 6. Seeds: Biology, Technology, and Role in Agriculture
* Week 7. Ten Thousand Years of Crop Evolution
* MIDTERM EXAM
* Week 8. From Classical Breeding to Modern Crop Improvement
* Week 9. Converting Solar Energy into Crop Production
* Week 10. Crop Diseases and Strategies for Their Control
* Week 11. Plant Nutrition and Crop Improvement in Adverse Soil Conditions
* Week 12. Weeds and weed control Strategies
* Week 13. Urban Myths and Real Concerns about GM Crops
* Week 14. Student presentations

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**Room: On-line**

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**Text book:** **Plants, Genes and Crop Biotechnology by Marteen J. Chrispels and David E. Sadava, 2003. In addition to the textbook, there will be a list of contemporary articles related to the weekly topis that students are required to read before class.**

### Grading: Mid-term 25 %, Project Report&Presentation % 25, Final exam 50 %