

## **BIMM 194: Plant Development and Biotechnology Winter 2019 Yanofsky**

### **GENERAL INFORMATION**

**Time and Place:** Tuesdays 9:00am-10:20am, 3010 York Hall  
**Professor:** Martin (Marty) Yanofsky email: myanofsky@ucsd.edu  
**Office Hours:** 3212 Muir Biology Building, by appointment

**ALL CLASS INFORMATION WILL BE POSTED on TritonEd.**

### **CLASS CONTENT**

This course will focus on molecular and genetic studies that have revealed the underlying mechanisms controlling development of plant stem cells, embryos, roots, flowers and fruit. An emphasis will also be placed on how basic science research in plant biology is being translated into major biotechnology breakthroughs that are having an impact on modern agriculture.

### **ATTENDANCE IS REQUIRED**

This is a seminar course and therefore attendance is mandatory. Only one unexcused absence is permitted without affecting your grade. Attendance will be taken at the start of each class meeting and you will need to sign in BEFORE the lecture starts. Missing too many classes may result in a lowering of your course grade.

### **COURSE PROJECT (25% of Grade) Due TUESDAY MARCH 12**

You will research and write a short paper on a topic related to this course. I will suggest one or more topics by the end of the second week of class or you can choose your own topic. If you choose your own topic you must first submit the topic to me for my approval **before February 15.**

This is intended to be a **short summary paper** and the **MAXIMUM** length of your paper will be **three single-spaced pages**. In addition to the three pages, you should also include a list of references for any facts that you cite in your paper so that readers of your paper will be able to verify your research. Note that your facts need to come from reliable sources!

### **UCSD POLICY ON INTEGRITY OF SCHOLARSHIP**

You are expected to read and abide by the UCSD POLICY ON INTEGRITY OF SCHOLARSHIP. Breach of policy will likely result in a failing grade.

<https://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>

### **FINAL EXAM (75% of Grade)**

A final exam covering material from the lectures will be on **Tuesday March 19.**

## **COURSE LECTURES:**

- January 8:** (Yanofsky) Agrobacterium: Nature's genetic engineer.
- January 15:** (Yanofsky) Genetic modification of plants.
- January 22:** (Estelle) Plant hormones.
- January 29:** (Yanofsky) Embryo and stem cell development.
- February 5:** (Yanofsky) Flower development, part 1.
- February 12:** (Yanofsky) Flower development, part 2.
- February 19:** (Busch) Root growth and development.
- February 26:** (Yanofsky) Fruit development and crop improvement.
- March 5:** (Mayfield) Algal biotechnology.
- March 12:** (Schmidt) Jatropha for fuel and other products.
- March 19:** (Yanofsky) Final Exam in 3010 York Hall.