

MCB 195J: Biological Scientist's Approaches to Identify and Solve Big Issues  
Syllabus: Ted Weinert, Kevin Bonine

### Shortened Course Description

**The General Idea:** This is an interactive, fast-paced, discovery-focused class. We imagine ourselves Great Thinkers. We wish to identify "Big Issues", understand underlying facts, come up with solutions, and communicate the idea to others. What Big Issues? Global warming, fracking, diabetes, degradation of plastics, recycling, food sources, human population growth and movement, health care, telomeres and stress, the power and limitations of medicine, and more! You come up with what Issues appeal to you, for whatever reason, together with other students and the Instructors! I have list I would love to explore!!!

This is meant to be fun, interactive, and informative as you develop ideas, from wild perhaps to substantiated or refuted with facts.

**Issue Analysis:** What's the Issue? What are some relevant facts? What would I like to know? What might be a solution?

**How do we do this?** We will engage each other, the internet, and any resource we can identify to generate a Issue Analyses (what is the issue, what are the facts, what are some things we would like to know, what are some solutions). Before class starts, we will have some reading and YouTube Videos, and short readings, to get you in the mood. **You need NOT know anything to engage in Thinking on Big Issues; you just have to be up for exercising your imaginations, digging into the internet for relevant observations, and communicating with fellow students and Instructors.**

**Where do we do this?** We will work together as a large group, and often working in small groups of 3-5 fellow students. We will work in diverse, stimulating locations that will be interesting in its own right. We will hold 5 or 6 sessions, including one session at Biosphere 2, one at Bio5, one at the Tree Ring Laboratory and one at a local café. In those 6 sessions, we will organize ourselves, identify what we want to think about, and dig in, together. (And, Ted will bring Jimmy Johns sandwiches to them all, free to you!)

At courses end, you and your group will give a 10-15 minute presentation on your Issue: what is the issue, what are some facts, what would you like to know, what are some possible solutions.

**When do we do this?** The Class Schedule\*\* is as unusual as the course. We will meet on 6 consecutive Saturdays; January 15, Jan 22, Jan 29, Feb 5, Feb 12, ending Feb 19. For two of these sessions we meet for an hour (12 to 1), to organize ourselves. For three sessions we meet for 4 hours (12-4); at Biosphere 2 (transportation provided), Bio5, and Tree Ring Lab. These 3 sessions will include a short tour of what each of these amazing places is about, and then 3 hours of working on our Big Issues. The last session is planned for a local, about 2 hours long, where each group presents their Issue Analysis.

**This is a new course.** It is an experiment, and something Dr. Kevin and Dr. Ted feel passionate about. Join us!