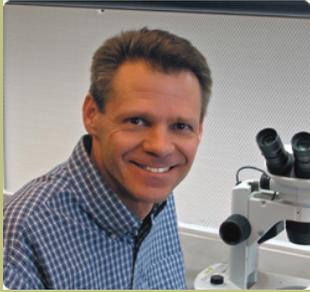


Class Focus

Bill Hoch - HORT 447 – Advanced Plant Propagation



Advanced Plant Propagation (HORT 447) focuses on the micropropagation, or tissue culture, of plants. The course is structured around a master chart of the different types of plant growth strategies and the methods that can be used to propagate each of these types of plants. Students use an experimental approach to learn each of these techniques, including shoot, callus and bulblet culture, in vitro germination, organogenesis, embryo rescue and embryogenesis. Students leave the course with a thorough understanding of the physiology and biology underlying these specialized plant propagation techniques. As there are no text books or manuals that adequately address the material of this course, the lectures and handouts provide all of the information necessary to understand the concepts employed in lab. Students write lab reports following completion of each exercise, take a midterm exam following conclusion of the lecture material, and give a presentation either on a topic of their choice or a review of a significant research paper. This course also makes extensive use of the spaced-education method, which involves testing students multiple times each week with randomly chosen questions that stress the application of concepts. This retrieval practice over the course of the semester increases the students' level of knowledge and long-term retention, which is then further reinforced by observations in the lab portion of the course.

I enjoy this course because of the amount of interaction I have with students in the labs, and the challenges of developing effective lab exercises and keeping it up-to-date with the advancing methods and technologies. I experiment with many new things each year in the hopes that one will become a new lab or improve an existing lab exercise. Student feedback has been very positive and has been vital to the improvement of the course.