

Course Focus

BIOO 220 - Botany

By Norm Weeden

Botany is again being offered by the Department of Plant Sciences and Plant Pathology! After the retirement of Dr. Rich Stout it took a while to readjust teaching loads, but this course clearly fills a gap between material presented in introductory biology courses or BIOB 160 and upper division courses such as Plant Physiology (BIOO 433), Plant Metabolism (BIOO 460) or Rocky Mountain Vegetation (BIOE 408). At the moment, Botany is offered alternate spring semesters, and will be taught this coming spring in the Plant Growth Center. There is no formal lab with the course, but we do use the collection of live plants in the PGC to examine structures of the different groups of plants we discuss in lecture.

The course deals with all plants organisms that have a genetically integrated plastid organelle) as well as touching briefly on organisms such as the cyanobacteria, fungi, and lichens. The course is NOT a memorization of Latin names, and plant taxonomy is generally limited to questions about large groups, such as "What are liverworts?" or "How do ferns differ from conifers?" We answer these questions by looking at gross anatomy, morphology, and life cycles. We then look at how multicellular plants handle issues such as water (why do mosses grow in wet habitats?) and nutrient transport (how does starch made in leaf tissue end up in potato tubers?), intercellular communication (how does sunlight on leaf blades cause the top of the plant to form flowers?), response to light (why a bean plant near a street light will not flower), and reproduction (what is apomixis anyway?). The final third of the course focuses on the adaptations of plants to their environment (what plants grow in Antarctica and why?) in order to apply what we have learned about the physiology and morphology of plants to practical problems associated with growing in a particular environment.

Hopefully, the course is more fun than work, but it will be anything but boring. Plants are unique and amazing organisms and will surprise you even after years of study.

If you have any questions, please contact me, Norm Weeden, at nweeden@montana.edu or 994-7622.