

Course Focus

BIOB 256 - Introduction to Biology: Cells to Organisms

By Cathy Cripps



I teach half of this introductory biology course which is offered every spring and has a home base in the Cell Biology and Neuroscience Department. It is part of a series of courses originally funded by a Howard Hughes Medical Institute grant to develop a basic biology program intended primarily for medically oriented students ("pre-meds"). Biochemistry students also choose this option. The goals of the course are to integrate qualitative biology with quantitative methods (statistics for my part) and to provide labs developed around 'active learning'. Prerequisites for the course include chemistry and a statistics course.

We use Freeman's "Biological Science" textbook for the series. The first part of BIOB 256 covers the basic groups of plants, plant physiology, and fungi. The second part of the course covers animal physiology which could be "animal physiology", "mammal physiology" or "human physiology" depending on who is teaching it. We use D2L, online quizzes, online movies and the "iclicker" system for lectures. Laboratory exercises are designed to have students set up their own experiments, analyze their own data, complete reports in a scientific format, and present information in a PowerPoint format. Students use either Minitab or Excel to evaluate their results statistically. We have been told that the laboratory section is rather 'intense' and that the reports take a lot of time, but students who have graduated from this series thank us later on.

Over 80% of our 200 students intend on entering the medical field in some way. The course is comprised primarily of freshman, but a significant number of upper classman as well as a group of Post Bacs and Veterans returning to school take the course. This series is also intended to prepare students for the MCAT. Follow-up courses include Biology 260: Intro Biol: Cells to Molecules, and Biology 258: Intro Biol: organisms to populations. The correct order in which to take the series is: 256, 260, and 258.