

School of Physical Sciences Seminar

Location: School of Physical Sciences Room N115

When: 12oc Thursday 27th October

Speaker: Dr. Duane Deardorff, Department of Physics and Astronomy, The University of North Carolina

Title: Physics Activities for the Life Sciences (PALS)

Abstract

At the University of North Carolina at Chapel Hill we completely redesigned our introductory physics course sequence for life science majors that enrolls ~500 students each semester. Our new courses operate in an interactive lecture/studio format, in which students spend nearly all their class time in small groups working on activities designed according to education research findings. These Physics Activities for the Life Sciences (PALS) address important physical principles and their applications to the life sciences, and many focus on topics that are not part of the traditional introductory physics curriculum. Whenever possible the class activities make use of authentic biological data. Assessment in this course includes a variety of formative and summative measures. Student learning gains on concept inventories show significant improvement over those in the previous version of the courses. Feedback from students and instructors has been generally positive, and student performance on course exams has met or exceeded that in previous years. Details of these assessment practices and instructional materials will be shared in this talk and are also available for use at other institutions.