Abstract Submitted
for the NWS09 Meeting of
The American Physical Society

Evolution of an Environmentally Themed Introductory Physics Course[1] MATHEW MARTINUK, ANDRZEJ KOTLICKI, GEORG RIEGER, Department of Physics and Astronomy, UBC — In 2007, motivated by research showing many students don't make connections between classroom physics and real-world phenomena, we fundamentally changed the curriculum and pedagogy of Phys 100, a large introductory course for non-physics majors at UBC. Our goal was to enable our students to use scientific knowledge to critically think about real world problems such as transportation and climate change. All topics in the course are now taught with strong connections to applications in the real world. For example conservation of energy is explored using models of home heating and the Earth's energy balance. Real-world connections are reinforced through weekly tutorials where students apply physics to context-rich real world problems, and through explicit discussion of real world analogues to lab experiments. These examples increase students' ability to see physics happening in the real world and encourage them to use their knowledge outside the classroom. This talk will discuss the evolution of the course over the first two years of implementation and results from exams and research on student attitudes.

[1]This work was supported by the Carl Wieman Science Education Initiative.

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Date submitted: 20 Apr 2009 Electronic form version 1.4