

Abstract Submitted
for the NES17 Meeting of
The American Physical Society

Recognizing and Engineering Routes Around the Cognitive Obstacles Encountered by Non-majors in Introductory Calculus-based Physics - Part 2 NORMA CHASE, MCPHS University - Boston — Given the broad cross section of humanity appearing for a first college level physics course (including highly intelligent non-visual thinkers), how is the lecturer to proceed? How is the Physics Community to proceed in devising curricular standards which will shape the cognitive development of the next generation of medical doctors (and other healthcare providers), biologists and chemists, engineers, and other citizens seeking (and in need of) a solid general education? How do we also avoid terrorizing and demoralizing less experienced students, while (at the same time) challenging students who have considerable experience (and find delight in) in solving long complicated problems? In Part 1 of this paper, the author discussed methods for recognizing and engineering routes around some of the many cognitive obstacles encountered by non-majors. This paper extends the previous, discussing additional routes around cognitive obstacles, including the ultimate obstacle – student incredulity that multi-step reasoning is “really necessary”.

Norma Chase
MCPHS University - Boston

Date submitted: 02 Mar 2017

Electronic form version 1.4