

Abstract Submitted
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Approaches to Teaching Introductory Calculus-based Physics at an University with a Health Sciences and Medical Focus– Part 1 NORMA CHASE, MCPHS University - Boston — What is the optimal set of objectives for a course intended for students planning careers in the Health Sciences or Medicine? Is it most useful to touch upon a very broad range of phenomena, focusing particularly on “advanced material” which directly relates to the Health Sciences and Medicine? Does it make more sense to “go deep” and guide students toward a thorough grasp of basic concepts and principles - and the ability to apply this understanding to solve physics problems? This paper argues strongly on the side of “depth” rather than breadth and presents an effective approach for “going deep” - even in the presence of exceedingly diverse student preparedness within a single class. Included in this work are 1) some interesting challenge problems which require students to gain ease in multi-step reasoning and which also measure the depth of student grasp of physics foundations; 2) approaches to recognizing information processing obstacles and engineering ways around them.

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