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Physics: A student's guide through the great texts[1] KERRY KUEHN, Wisconsin Lutheran College — Although memorizing formulae and learning how to perform calculations is crucial for acquiring a working knowledge of physical theories, the standard pedagogical method employed by many textbooks does not prepare the student to become a practicing scientist precisely because it tends to mask the actual scientific method: the science is presented as an accomplished fact; the prescribed questions revolve largely around technological applications of accepted laws. In this talk, I will describe a two-year general physics curriculum which I have developed and taught for the past decade to undergraduate students at Wisconsin Lutheran College. The curriculum is unique in that it provides students of the natural and mathematical sciences with a comprehensive introduction to physics based on the careful reading and analysis of selections from foundational texts in physics and astronomy. The curriculum is designed to encourage a critical and circumspect approach to the study of natural science, while at the same time developing a suitable foundation for advanced coursework in physics. Through the careful reading and analysis of foundational scientific texts, students learn skills which are essential when considering the practical and philosophical implications of scientific theories.

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Kerry Kuehn
Wisconsin Lutheran College

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