

Abstract Submitted
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What is computational physics? An embarrassment of riches for teaching computational physics LARRY ENGELHARDT, Francis Marion University — The first decade of the 21st century has provided a wealth of exceptional resources for teaching computational physics, including numerous textbooks, libraries of computer codes (visual as well as numerical), and high-level interfaces for accessing these libraries. We are now faced with the very real challenge of choosing which of these resources to incorporate into the finite number of courses available in a given curriculum. This choice depends on several factors: How much time can be allocated to teaching computational methods and at what stage in the curriculum? What are the goals? (Learning physics better? Learning to individually implement numerical solutions for small-scale problems? Being prepared to work in research labs studying large-scale problems?) Are commercial packages an appropriate option for your student population? There are no right and wrong answers to these questions, and I will present more questions than answers! However, in recent years I have taught three undergraduate computational physics courses per year, and I will discuss some of the decisions that have been made regarding those courses.

Larry Engelhardt
Francis Marion University

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