

A New Integrated Approach to Physics

David Snoke is an Associate Professor of Physics and Astronomy at the University of Pittsburgh. Several years ago he was asked by a homeschool group to teach a physics course for high schoolers. What started as a single class has developed into a new high school textbook and a new integrated approach to teaching physics.

This book is intended for a single year-long course of high school physics or an introductory course of college physics. It presents an overview of the entire subject of physics. This book is not just another version of the standard introductory physics text; it is an entirely new approach to physics. Some educators will find it surprising that the book leaves out, or treats in very brief fashion, several topics that are covered extensively in typical physics books, such as inclined planes, springs, etc. The reason is there are two kinds of physics courses. One type of course answers the question, "What introductory material should an engineer or science major in college study?" A second type of course answers the question, "What should every educated person know about physics, assuming that he or she never studies physics again?" This course is designed to answer the second question. As such, it spends a large fraction of the time on *modern* physics, the types of questions that modern physicists actually think about.

Some educators will find it surprising that many fairly advanced topics of philosophy and Christian theology are included in this course. Is this appropriate for high school or college students? Absolutely. Why should students be experts in machinery and equations and unlearned in related philosophical and theological questions? Historically, physics and philosophy have interacted strongly, under the name Natural Philosophy, hence the title of this book.

This book is not necessarily only for high school students. If you have already studied physics but never thought about the philosophical and theological issues involved, this book is for you. The interaction of the Bible and science has been a central ingredient of the development of natural philosophy in the Western world, and this interaction still affects the politics of science and education in the United States today. Knowing what the Bible says, and does not say, is essential for understanding this debate. A warning: what makes philosophy interesting is the controversies. Dealing with controversial matter, however, means taking positions that some people will not like. Instead of shying away from these issues, the student is encouraged to study the issues further. Wisdom comes from taking the time to understand controversial issues, not avoiding them.

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**Natural Philosophy
A Survey of Physics and Western Thought**

Natural Philosophy

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Dr. David W. Snoke