



## New Model Course in Applied Quantum Physics

\* Indicates a research-demonstrated benefit

## **Overview**

Resources for teaching introductory quantum mechanics and modern physics with an emphasis on concepts and applications. Includes tutorials, suggested software, homework, exam questions, and information on understanding how students learn the physics. Materials available online, or published as "Activity-Based Physics Tutorials, Vol. 2"

Type of Method	Curriculum supplement, Tutorials
X: Level	<b>Designed for:</b> Intermediate Undergraduate <b>*</b> <b>Can be adapted for:</b> Teacher Preparation, Teacher Professional Development, High School, Intro College Calculus-based, Intro College Algebra-based, Intro College Conceptual, Advanced Undergraduate
fit Setting	<b>Designed for:</b> Lecture - Small (<30 students), Recitation/Discussion Session, Homework <b>Can be adapted for:</b> Lecture - Large (30+ students), Studio
📕 Coverage	Many topics with less depth
🗾 Topics	Modern / Quantum
Instructor Effort	Medium
2 Skills	<b>Designed for:</b> Conceptual understanding of physics content, Connecting conceptual and mathematical understanding, Understanding how physics relates to the real world
Research Validation	Based on research into: how students learn $\$ , student ideas about specific topics $\$
Sompatible Methods	Peer Instruction, PhET, JiTT, CGPS, Physlets, SCALE-UP, OSP, LA Program, CU Modern, QuILTs, PI QM, Tutorials, Clickers, CAE TPS, Thinking Problems
Similar Methods	ABP Tutorials, CU Modern
Developer(s)	Michael Wittman, Richard Steinberg, and Edward Redish



