




Peer Instruction for Quantum Mechanics

 Indicates a research-demonstrated benefit

Overview

A collection of multiple-choice and short answer questions for discussion and reflection in an upper-level undergraduate quantum mechanics course.



Type of Method

Instructional strategy, Curriculum supplement




Level

Designed for: Upper-level Undergraduate 

Can be adapted for: Graduate School  , Intermediate



Setting

Designed for: Lecture - Small (<30 students)  , Lecture - Large (30+ students), Recitation/Discussion Session, Studio



Coverage

Few topics with great depth, Many topics with less depth



Topics

Modern / Quantum



Instructor Effort

Low






Resource Needs

Projector




Skills


Designed for: Conceptual understanding  , Making real-world connections, Metacognition




Based on research into: theories of how students learn  , student ideas about specific topics 



Research Validation

Demonstrated to improve: conceptual understanding 

Studied using: cycle of research and redevelopment  , student interviews

 , classroom observations  , research at multiple institutions  , peer-reviewed publication 




Compatible Methods

[Peer Instruction](#), [PhET](#), [JiTT](#), [CGPS](#), [Physlets](#), [SCALE-UP](#), [CAE TPS](#), [New Model Course](#), [TEFA](#), [CU Modern](#), [CU QM](#), [QuILTs](#), [Paradigms](#), [Clickers](#)



Similar Methods

[Peer Instruction](#), [Workbook for Introductory Physics](#), [CAE TPS](#), [TEFA](#), [CU QM](#), [QuILTs](#), [Clickers](#)

 **Developer(s)** Chandralekha Singh and PER team at the University of Pittsburgh

 **Website** <http://www.phyast.pitt.edu/~cls/peer/>

Teaching materials

You can access the resource material, which includes the "ConcepTests" for assessment with continuous feedback to the students, standardized assessment tools, reflective questions and the material for Just-In-Time Teaching (JITT) for quantum mechanics courses, by contacting the developer at clsingh@pitt.edu.

Resources, training, & community

Overview: [Peer Instruction for Quantum Mechanics](#)