




CU Learning Assistant Program

 Indicates a research-demonstrated benefit

Overview

A program to recruit science majors to become K-12 teachers and to improve undergraduate education by implementing large-scale teaching reform.






Type of Method

Instructional strategy



Level



Designed for: Teacher Prep Course  , Intro College Calculus-based  , Intro College Algebra-based  , Intro College Conceptual 

Can be adapted for: Intermediate  , Upper-level Undergraduate 



Setting

Designed for: Recitation/Discussion Session 

Can be adapted for: Lecture - Large (30+ students)  , Lecture - Small (<30 students)  , Lab, Studio



Coverage

Few topics with great depth, Many topics with less depth



Topics

Mechanics, Electricity / Magnetism, Waves / Optics, Thermal / Statistical, Modern / Quantum, Mathematical, Astronomy, Other Science, Pedagogy



Instructor Effort

Medium




Resource Needs



TAs / LAs, reformed curriculum materials



Skills



Designed for: Conceptual understanding  , Metacognition, (Depends on the instructor and use of materials. Instructor may use materials that explicitly target any of these.)




Can be adapted for: Problem-solving skills, Lab skills, Making real-world connections, Using multiple representations, Designing experiments, Cooperative learning

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



Research Validation

Demonstrated to improve: conceptual understanding  , beliefs and attitudes 

Studied using: student interviews  , classroom observations  , research at multiple institutions 



**Compatible
Methods**

[Peer Instruction](#), [PhET](#), [UW Tutorials](#), [JiTT](#), [Ranking Tasks](#), [ILDs](#), [CGPS](#), [Physlets](#), [Context-Rich Problems](#), [RealTime Physics](#), [Workshop Physics](#), [TIPERs](#), [ABP Tutorials](#), [SCALE-UP](#), [Modeling](#), [OSP](#), [SDI Labs](#), [OST Tutorials](#), [ISLE](#), [Thinking Problems](#), [Workbook for Introductory Physics](#), [PBI](#), [PET](#), [PSET](#), [LEPS](#), [CAE TPS](#), [Lecture-Tutorials](#), [Astro Ranking Tasks](#), [MBL](#), [New Model Course](#), [CPU](#), [SCL](#), [TEFA](#), [CU Modern](#), [CU E&M](#), [CU QM](#), [QuILTs](#), [IQP](#), [Thermal Tutorials](#), [Mechanics Tutorials](#), [SGSI](#), [Paradigms](#), [EiP](#), [Tools for Scientific Thinking](#), [M&I](#), [Tutorials](#), [Clickers](#), [Responsive Teaching](#)



**Similar
Method**

None



Developer(s)

Valerie Otero and Dick McCray



Website

<http://laprogram.colorado.edu/>