Just-in-Time Teaching

Indicates a research-demonstrated benefit

Overview

Students answer questions online before class, promoting preparation for class and encouraging them to come to class with a "need to know."

Type of Method

Instructional strategy

Level

Designed for: Intro College Calculus-based, Intro College Algebra-based

, Intro College Conceptual, Intermediate, Upper-level Undergraduate

Can be adapted for: Any

Setting

Designed for: Lecture - Large (30+ students)

Can be adapted for: 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, High

Resource Needs

Computers for students, Course management system or other way of collecting responses online

Skills

Designed for: Conceptual understanding, Making real-world connections, Using multiple representations, Study skills

Can be adapted for: Metacognition

Research Validation

Based on research into: theories of how students learn

Demonstrated to improve: conceptual understanding, problem-solving skills

, beliefs and attitudes, retention of students, study skills

Studied using: student interviews, classroom observations

Peer Instruction, PhET, UW Tutorials, 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, LA Program, PBI, PET, PSET, LEPS, CAE TPS, Lecture-Tutorials, Astro Ranking Tasks, MBL, New Model Course, CPU.
The JiTT website has a large collection of JiTT activities for many topics in physics and for many other disciplines.