Randomizing Homework and Exams with Python, LaTeX, and RandAssign

GEOFFREY POORE, Union University — Randomization is common in online homework systems, since it discourages copying and can encourage mastery by allowing students to attempt several variations on a problem. Paper-based homework and exams could also benefit from randomization in many cases. Over the past three years, I have developed a workflow for creating randomized paper-based assignments using Python and LaTeX. This has culminated in the RandAssign package for Python, which simplifies the creation of assignments and has the potential to automate much of the grading process. I will present examples from physical science and introductory physics classes.