

Preparing Graduate Student Teaching Assistants for Teaching Labs Associated with Large Lecture Introductory Biology Courses

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Graduate student teaching assistants (GTAs) are usually at the forefront of laboratory teaching in large lecture courses. As instructors, we rely on them to teach content and facilitate laboratory experiments and activities. Undergraduate students rely on GTAs for providing direct student-teacher time they lack in the lecture component of a course. The laboratory is also the place where students have opportunities for hands-on learning and extending concepts. In an attempt to improve teaching in the laboratory, we hold weekly preparatory meetings that aim at putting GTAs in the “student seat”—letting them experience the lab from an undergraduate’s perspective. We also provide guidance for classroom management and teaching strategies. GTAs submit their major assessments for review to ensure consistency and higher order thinking questions throughout all laboratory sections. As part of GTA training, we evaluate each GTA through classroom observations and follow-up meetings to discuss teaching and a plan of action for improvement. In addition, GTAs can elect to participate in a certificate program that has been tailored for life science college teaching. The program, known as “CoAT for Life Sciences” (Certificate of Accomplishment in Teaching for Life Sciences) is comprised of a two-semester seminar course. In the first semester, GTAs are introduced to pedagogical content knowledge with an emphasis on laboratory teaching. In the second semester, GTAs pair up to conduct self and peer-evaluations. GTAs also complete a teaching portfolio and attend at least three university-wide teaching workshops offered through the Graduate School.

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