## LA Program Testimonials

## Biology Courses

Introduction to Biology (Lecture and Lab) - "Our LA s work with our first year life sciences majors during activity based classes, in the laboratory and in out of class sessions. Iman and Ben have been working on student misconceptions in one of the laboratory projects, and will help to redesign some of the exercises. Delanie worked with Dr. David Martins (University Writing Program) last semester to design some exercises to help students read scientific literature and begin to "write like a scientist". Our LAs run out of class sessions to help students with homework, laboratory reports and the ever-popular preexam reviews."

Cell and Molecular Biology - "The Cell and Molecular Biology course is challenging for a variety of reasons: the course is required for many programs (Biology, Biotechnology, Bioinformatics and Biomedical Sciences) and is a pre-req for any non-biology major who is seeking a minor in biology! Approximately 145 students have been enrolled in the course each Fall semester which used to be delivered in one large lecture hall. Students enter the course with a variety of background knowledge and biology experience and a variety of willingness/enthusiasm/dread/etc. for the course. Many of the students are used to a straight-lecture approach and are uncomfortable (at least at first) in a classroom that expects a high level of engagement from all students."
"Starting last semester, with the help of LAs, I have been able to start the ball rolling in terms of "reforming" this course. Instead of one large lecture our Department Head has allowed me to split the class into smaller sections. This fall our "small" sections are around 45-48 students and one other instructor (Beth VanWinkle) is also involved in the 3 section course now. While the sections are not tiny, they are better than 145 students. The LAs are in class to promote discussion, listen to debates about clicker questions, help with word problems and help students through many of the hand-held model-based activities. The LAs each hold a one-hour "help" session each week (3 total). Since our first Exam is coming up in 2 weeks, I have been posting extra "practice" type problems/worksheets. It is our hope that students attend LA sessions to work through these problem sets as exam prep."

## Mathematics and Statistics

Elements in Multivariable Calculus and Differential Equations - "The course has a history of high DWF rates but since the implementation of the LA program, students have gained more interest in the course and the DWF rate has dropped from above $45 \%$ to below $20 \%$. Each LA attends one section, as required, though some of the LAs attend other sections if their schedule permits. The students taking the course learn quickly that ALL four LAs are THEIR LAs, even if they do not see them in the classroom setting. During class, the LAs and instructors present a warm up problem that forces the students to review concepts in algebra, calculus or from past lessons in the current course. These problems are designed to lead into the day's concept for lecture, which the students have quickly discovered. During the lecture, the LAs use the warm up problem to take attendance and make note of any serious misconceptions from the papers handed in. After the brief lecture, the LAs and instructors assist the students in completing a second, more difficult problem that relates entirely to the concept for the day."
"The LAs hold a total of 10 recitations a week between the four of them. During recitation, students are divided up based on what work they are completing. Students sign in to recitation so that we know who and how many are attending. Our mentoring meetings consist of discussions about the past week's work and what is to come in the next week. We chat about student strengths and weaknesses and where we might be able to help those in need and how to get more students to attend recitation."

Precalculus - "I have one LA in one section of Precalculus MATH-111. We have weekly mentoring meetings every Tuesday morning. I am using MyMathLab in my Precalculus class. During recitations students work on MML homework assignment, or complete practice problems assigned during class time, or work on extra, challenge problem that is chosen by the LA. It is my first time teaching LA supported class, and I really hope that it will help students to succeed."

Statistics - The first semester I worked with LA's, they came to class, helped with the Worksheets the students did in class each day, they held "office hours" and arranged study groups, and they met with me once per week. At the meetings, we would go over the worksheets we had done in class that week. They were able to help me "see" the assignments from a student's perspective. It has been SO helpful to have the LA's IN class. First of all, they are able to help answer questions while the students are working in groups on the Worksheets. When it is just me and 35 students it can get quite difficult. The fact that the LAs come to class means that the students KNOW who they will be getting help from and helps the students get comfortable with the LAs. As a result, the students aren't afraid to go see them for extra help. And since the LAs were in class, they know what things were covered and HOW they were covered. The consistency helps the students a lot."
"The weekly meetings with the LAs were particularly useful. The LAs were able to tell me what they didn't understand and what the students they worked with had trouble with. They helped come up with additional questions to build in more scaffolding to help the students build the skills they needed to be successful in statistics. This time, my LA is coming up with some new versions of worksheets that use more student centered examples/context. I like the idea that this year he is trying his hand directly at curriculum development. In addition, the generational difference makes it difficult for me to come up with examples that they can relate to."

## Physics

College Physics I - "Each LA holds a recitation/extra help session each week. I am having my class do a weekly written homework assignment. The LAs grade it and then give me a summary of the issues the students are having. We will the use the recitation sessions to address the problems, or I can address the issues in class. The two LAs will also hold a join review session before each test."

Modern Physics Lab - "My LAs are both seasoned LAs and we are now pioneering the first "upper" level LA course with PHYS315 - Experiments in Modern Physics. In the past Modern Lab has ran four experiments at a time, with four groups of two students each. There was a lot of dead time wasted with students...doing the pre-lab/theory on pen and paper, all while sitting in front of the equipment. We are attempting a model that has only two experiments running at a time, with the two groups in each room needing to share time on the equipment. We are enforcing that pre-lab/theory be completed outside of class so
that the lab time is devoted to collection of data and analysis. One LA is leading one analysis session Thursday 5-7 pm and the other is leading on Saturdays $10 \mathrm{am}-12 \mathrm{pm}$. These were the most voted options by the students of times that worked for the LAs. We are awarding bonus participation credit for attendance in these sessions, which may help offset penalties to their grade for missing pre-labs or attendance."

University Physics I - "I am having my LA help develop a more thorough assessment for all UP1 materials that can be used in the future as a pre and post-tests. My LA is keeping an eye out in the graded material (graded by the TA) for common misconceptions so that he can develop materials related to those or at least keep me posted about it. He also has 'sessions' he holds outside of class that are Q and A sessions, as opposed to set "watch him work through examples." This gives additional time to students who need or want it."

University Physics II - "The LAs hold recitation sessions in the Thursday exam slot and the corresponding Tuesday exam slot. Right now, these sessions consist of giving students a few additional problems to work on that the LAs come up with (with some suggestions and input from me), as well as answering any questions, helping with homework, etc. I am allowing attendance at one of the recitation sessions to offset $1 / 2$ of a missed workshop attendance."

