

## UHM Learning Assistant Program Sample Pilot Result Figures

*Use of LAs in Fall 2017, Spring 2018*

| Course      |               | Enrollment | LAs | Implementation Notes   |
|-------------|---------------|------------|-----|--|
| Mathematics | Math 100*     | 262        | 3   | 1 large lecture section (twice per week), taught by faculty (no LAs)<br>Five 50-min recitation sections of ~55 students once a week (each facilitated by 1 TA + 2 LAs)<br>Optional help sessions (TAs and LAs) |
|             | Math 161*     | 57         | 2   | One section, taught by TA<br>Mixed lecture & active learning (TA + 2 LAs)  |
|             | Math 203*     | 75         | 2   | Two sections of ~38 students, taught by TA<br>Two lectures + one recitation (TA + 2 LAs)   |
|             | Math 134      | 116        | 5   | Five sections of ~26 students, taught by TAs<br>90-min mixed lecture & active learning, twice per week (TA + LA)<br>Optional help sessions (TAs and LAs)   |
| Physics     | Physics 151   | 224        | 3   | Lecture, taught by faculty; LAs assist active learning (~20% of class)<br>Optional help room and review sessions (LAs)   |
|             | Physics 152   | 146        | 2   | Lecture, taught by faculty; LAs assist with occasional active learning<br>Optional help room and review sessions (LAs)   |
| Chemistry   | Chemistry 162 | 203        | 5   | Piloting in one of three sections (~500 students enrolled in Chem 162)<br>Lecture, taught by faculty; LAs attend ten 50-min discussion sections of ~20 students once a week (TA + LA)                          |

*\* These Math courses were revised to satisfy the new Quantitative Requirement that was approved by the Faculty Senate.*

## UHM: Math 100 (Fall 2017 LA pilot results)

**Two instructors:** Section 1 with LAs, Section 2 without LAs.  
Both instructors used the same material, exams and grading scheme.

**Results:** These data show that LAs lower the rate of failing and dropping, and at the same time increase the rates of A+. In addition to addressing concerns of retention and passing, this is evidence that the LA-supported course also provides a better environment for our best students.

| Math 100 Section   | % of A+         | % of Failing (D-Fs) | %Ws  |
|--|-----------------|---------------------|------|
| Section 1: without LAs   | 69% (9.2% A+)   | 8%                  | 4%   |
| Section 2: with LAs and one lecture transformed into a recitation a week | 72.3% (22 % A+) | 5.5%                | 2.4% |

Figure 1: Math 100 Fall 2017 Pilot Data Summary

## UHM: Chem 162 (Spring 2018 LA pilot in progress)

**Instructor A:** Teaching two sections without LAs. Three 50-min lectures.

**Instructor B:** Teaching one section with LAs. Three 50-min lectures, plus students attend a 50-minute discussion section facilitated by a TA and LA. (2 TAs, 5 LAs)

Both sections are using the same exam questions.

| Chem 162 Section    | Exam 1 (mean) | Exam 2 (mean) | Exam 3 (mean) | Final Exam (mean) |
|---------------------|---------------|---------------|---------------|-------------------|
| 1: No LAs (n = 148) | 68.6.%        | 49.1%         | TBD           | TBD               |
| 2: No LAs (n = 154) | 68.6%         | 49.1%         |               |                   |
| 3: LAs (n = 187)    | 72.5%         | 56.5%         | TBD           | TBD               |

Figure 2: Chemistry 162 Spring 2018 Pilot Data Summary

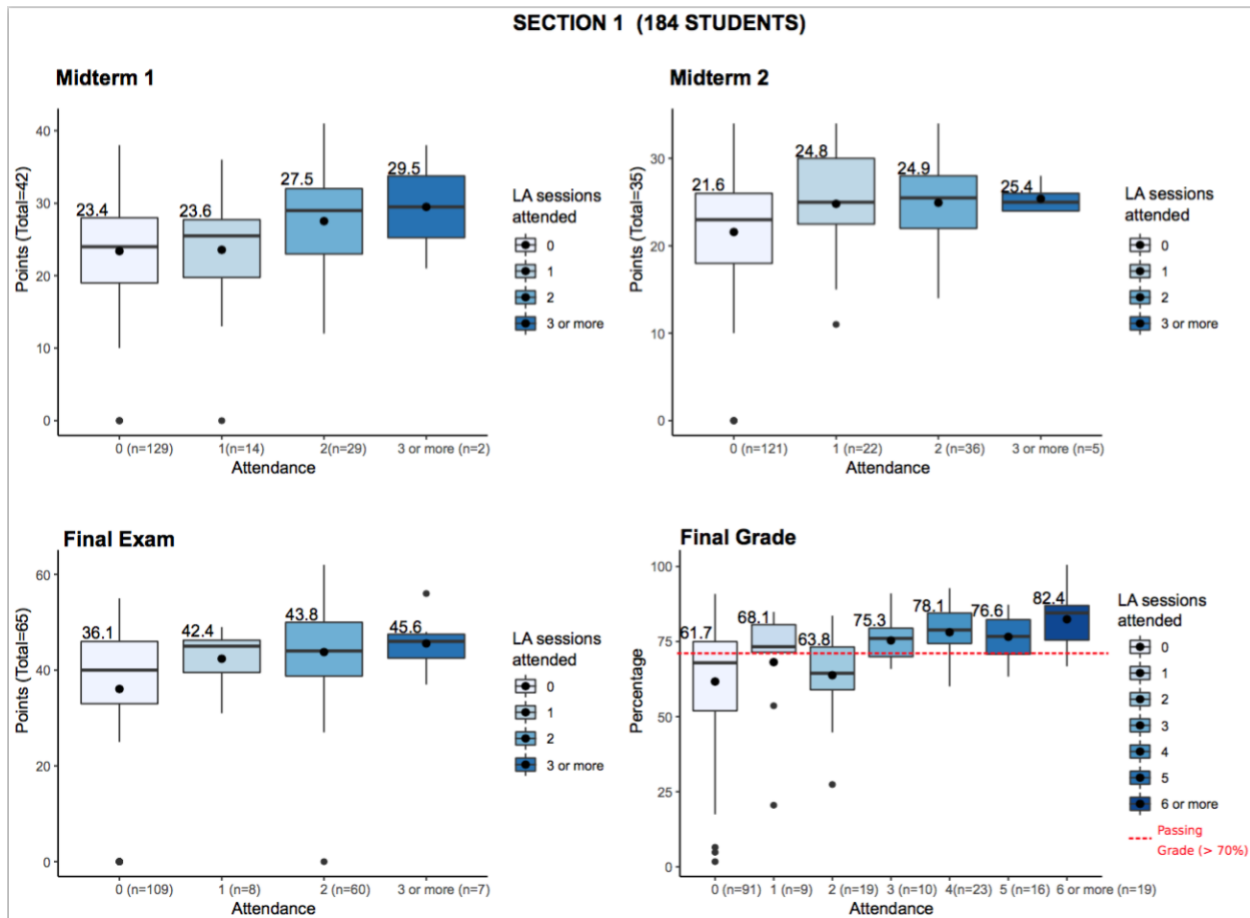


Figure 3. Boxplots for attendance of LA recitation sessions for Section1 during the Fall 2019. In the x-axis the number of sessions attended and the total number of students in each of the boxplots. In the y-axis the grade obtained per exam or the percentage of final grade (lower right panel). The numbers in each box are the average points (or percentage) for each value of attendance, and they are also represented by the dot within each boxplot.

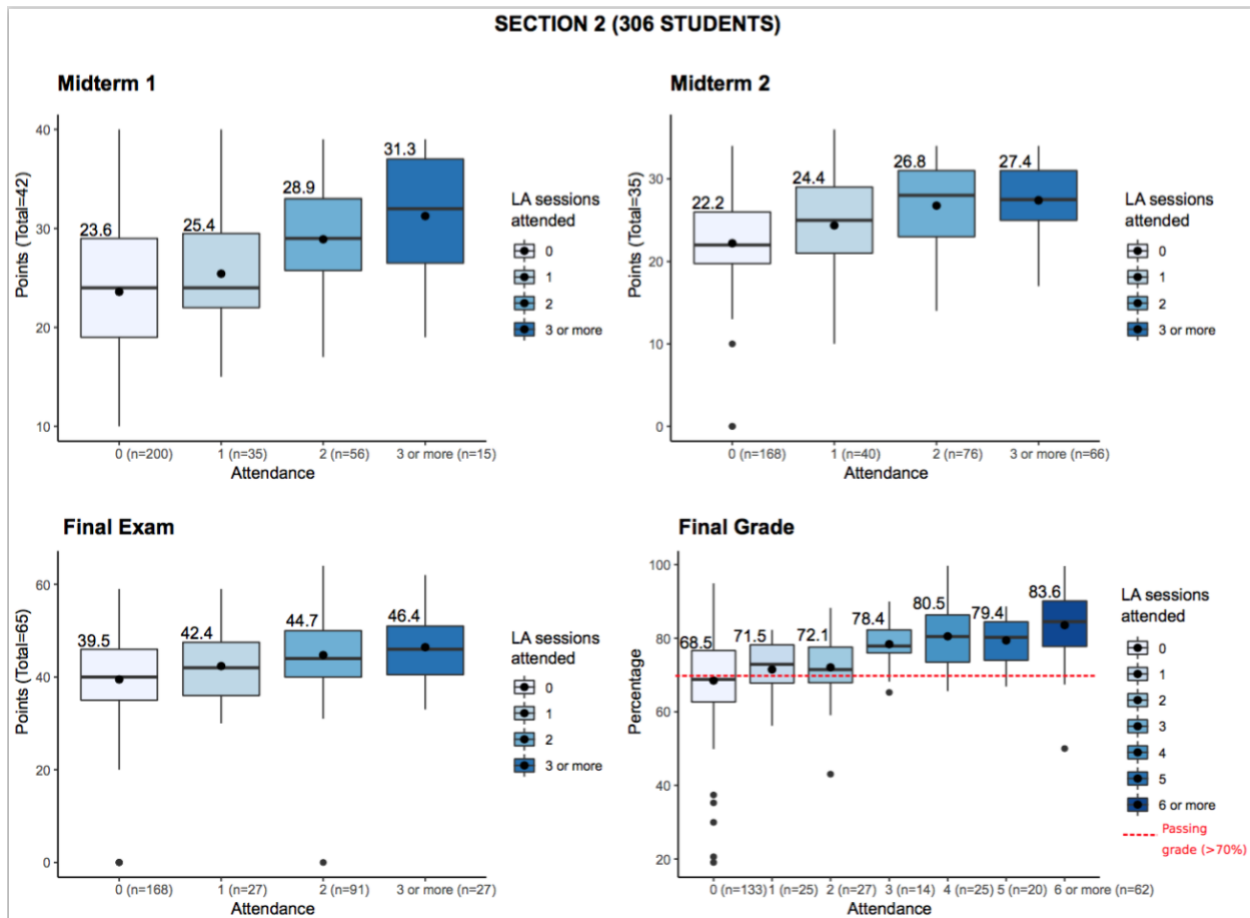


Figure 4. Boxplots for attendance of LA recitation sessions for Section 2 during the Fall 2019. In the x-axis the number of sessions attended and the total number of students in each of the boxplots. In the y-axis the grade obtained per exam or the percentage of final grade (lower right panel). The numbers in each box are the average points(or percentage) for each value of attendance, and they are also represented by the dot within each boxplot.