# Bergen Community College

## ASSESSMENT REPORT FORM
## ADMINISTRATIVE AND EDUCATIONAL SUPPORT

**Assessment Period**: 7/1/15 – 6/30/17

**AES Department**: Cerullo Learning Assistance Center – Tutoring Center

**Department Head:** Khairia Fazal, Managing Director of Learning Assistance Services

**Department Assessment Liaisons**:
John Findura, Interim Manager of Cerullo Learning Assistance Center
Madhvi Shah, Mathematics Tutorial Supervisor
John Cichowski, STEM Tutorial Supervisor

**Date Submitted**:

- **Mission/goal statement or description of the Department**:

The Cerullo Learning Assistance Center (CLAC) is committed to providing quality academic support accessible to all Bergen Community College (BCC) students. The CLAC comprises the Tutoring Center, Math Walk-In Center, Writing Center, English Language Resource Center, and the Tutoring Center at the Meadowlands Campus; all centers offer various avenues of tutorial assistance to address the diverse needs of our student population. A dedicated and trained staff of Peer and Professional Tutors work together in a nurturing environment to foster independent learning while guiding students through their educational journey at BCC.

- **Department's Core Objectives/Outcomes**:
  - Design student-centered academic support services
  - Develop academic support services
  - Foster independent learning

## SEMESTER 1: CREATING A DEPARTMENT-LEVEL ASSESSMENT PLAN

1. **Department's Goal(s) or Outcome(s) to be assessed (from the above section):**
   Students in General Biology I (BIO-101), Introduction to Chemistry (CHM-100), and Introduction to Physics (PHY-185) who visit the Cerullo Learning Assistance Center's (CLAC) services will achieve a statistically significant higher final grade and self-reported success in their courses than those who did not visit the CLAC

Definitions

Success: higher final grade and self-reported course competence

STEM Services under Examination: One-On-One Tutoring; Drop-In Assistance; Math & Science Walk-In Center (MSWIN)

**2. Means of Assessment:**

a. Every section of BIO-101, CHM-100, and PHY-185 offered during Fall 2016 will be selected.
b. Tutoring attendance will be recorded for the STEM services under examination by means of Tutortrac, the web-based appointment system utilized by CLAC.
c. Academic outcome (pass, fail, withdrawal) will be recorded by means of Datatel at the end of the Fall 2016 semester for each student from the sample.
d. Also, self-reported surveys will be distributed to the sample population in an effort to capture parameters involving perceived confidence and acquired skill level as an effort of the tutorial services received.

**3. Feedback from Vice President:**

## SEMESTER 2: DEVELOPING ASSESSMENT TOOL (s) and TIMELINE

**3A. Describe or attach assessment tool (s), including sources of data, timeline for data collection and how data will be analyzed.**

Assessment Tools

- Quantitative Data - Datatel and Tutortrac

All sections of BIO-101, PHY-185, and CHM-100 will be selected to assess the correlation between tutorial visits and academic success. These courses have been selected for the following reasons:

- ❖ These are general education courses in which STEM and non-STEM majors are included
- ❖ These are generally required for STEM majors
- ❖ More sections are offered for these courses than any other STEM courses

The students' final grades will be compared to the number of visits recorded by the CLAC Tutoring Center and the Math & Science Walk-in Center; one-on-one appointments, drop-in sessions, and Math & Science Walk-In visits will be captured.

For the purposes of this study, the 15-week course offerings will be selected (Flex Start, Meadowlands, online courses and hybrid courses will not be considered).

- Qualitative Data - Self-reported Survey

The students enrolled in the target courses will be asked to complete a self-reported survey. Thus, students' perceptions in regards to their level of confidence and the skills in these courses will be captured.

Sources of Data

As mentioned above, Datatel and Tutortrac will be utilized to identify the correlation between tutorial support via the Tutoring Center and student academic success.

Timeline

- **Summer of 2016:** Preliminary spreadsheet preparation
- **Fall of 2016:** Students' final grades will be collected and their tutorial visits will be examined; surveys of self-reported success will be distributed during the last two weeks of the fall semester and collected the second week of January
- **Spring of 2017:** Statistical analyses will be conducted thoroughly to identify the correlation in question

**3B. Desired results department and Vice President would like to see.**

The desired results are focused on identifying a positive correlation between increasing number of Tutoring Center and Math & Science Walk-in Center visits and the students' final grades, reported level of confidence, and reported belief in gained skill acquisition.

- **Feedback from CIE:**

## SEMESTER 3: COLLECTING AND ANALYZING DATA

Data was collected for the three course, BIO-101, CHM-100, and PHY-185 for the Spring, Summer and Fall semesters of 2016. CIE, using data collected by the CLAC, was able to compare the final semester grades for students registered in those courses who attended tutoring to those registered in those courses who did not attend tutoring. The full tables appear in the Appendix of this document. Listed here is a breakdown comparing students who received A, B+, and B grades to those who received grades in the C+ - D category and those in the E, F, and W category. After analyzing the data, the conclusion reached is that students who attended the

CLAC for assistance in BIO-101, CHM-100, and PHY-185 were more likely to pass their class and/or not receive a grade of E or W, than those students who did not attend the CLAC.

However, due to the relatively low percentage of overall students in these classes who did come to the CLAC for assistance, the final grade breakdowns are not statistically significant.

As for the qualitative data, 2,560 students who had registered for one of the assessed courses during the assessed timeframe were contacted via email and encouraged to participate in the survey. Of those 2,560 students, 178 responded (7% response rate), however, of those 178 responses only 79 students had actually received tutoring services for those courses. Please see Appendix for complete data.

The student respondents who did use the CLAC's services were satisfied with those services. 100% of respondents who took BIO-101 found the materials in the Math & Science Walk-In Center to be "somewhat helpful" to "very helpful." When asked "How helpful was tutoring in your overall performance in BIO-101" 97% responded "somewhat helpful" to "very helpful." The responses for CHM-100 and PHY-185 follow this pattern. A typical open-ended response is "I was satisfied with everything. The tutors were very kind. They know how to teach us. Thank you."

**BIOLOGY 101**

All Semesters in 2016 – BIO-101

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 61 Students, 61% | 708 Students, 50.8% |
| C+, C, D | 32 Students, 32% | 395 Students, 28.3% |
| E, F, W | 7 Students, 7% | 291 Students, 20.9% |

Spring 2016 – BIO-101

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 34 Students, 73.9% | 309 Students, 48.5% |
| C+, C, D | 11 Students, 23.9% | 196 Students, 30.8% |
| E, F, W | 1 Student, 2.2% | 132 Students, 20.7% |

Summer 2016 – BIO-101

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 9 Students, 50% | 147 Students, 71.4% |
| C+, C, D | 9 Students, 50% | 39 Students, 18.9% |
| E, F, W | 0 Students, 0% | 20 Students, 9.7% |

Fall 2016 – BIO-101

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 18 Students, 50% | 252 Students, 45.7% |
| C+, C, D | 12 Students, 33.3% | 160 Students, 29% |
| E, F, W | 6 Students, 16.7% | 139 Students, 25.3% |

**CHEMISTRY 100**

All Semesters in 2016 – CHM-100

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 141 Students, 63.2% | 714 Students, 61.7% |
| C+, C, D | 59 Students, 26.5% | 205 Students, 17.7% |
| E, F, W | 23 Students, 10.3% | 238 Students, 20.6% |

Spring 2016 – CHM-100

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 65 Students, 58% | 348 Students, 63.2% |
| C+, C, D | 34 Students, 30.4% | 102 Students, 18.5% |
| E, F, W | 13 Students, 11.6% | 101 Students, 18.3% |

Summer 2016 – CHM-100

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 16 Students, 80% | 62 Students, 81.6% |
| C+, C, D | 2 Students, 10% | 6 Students, 7.9% |
| E, F, W | 2 Students, 10% | 8 Students, 10.5% |

Fall 2016 – CHM-100

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 60 Students, 65.9% | 304 Students, 57.4% |
| C+, C, D | 23 Students, 25.3% | 97 Students, 18.3% |
| E, F, W | 8 Students, 8.8% | 129 Students, 24.3% |

**PHYSICS 185**

All Semesters in 2016 – PHY-185

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 17 Students, 45.9% | 200 Students, 53.1% |
| C+, C, D | 14 Students, 37.8% | 84 Students, 22.3% |
| E, F, W | 6 Students, 16.2% | 93 Students, 24.7% |

Spring 2016 – PHY-185

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 7 Students, 43.8% | 84 Students, 48% |
| C+, C, D | 7 Students, 43.8% | 47 Students, 26.9% |
| E, F, W | 2 Students, 12.5% | 44 Students, 25.1% |

Summer 2016 – PHY-185

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 1 Student, 50% | 46 Students, 79.3% |
| C+, C, D | 0 Students, 0% | 9 Students, 15.5% |
| E, F, W | 1 Student, 50% | 3 Students, 5.2% |

Fall 2016 – PHY-185

| Grade Range | Attended Tutoring | Did Not Attend Tutoring |
|---|---|---|
| A, B+, B | 9 Students, 47.4% | 70 Students, 48.6% |
| C+, C, D | 7 Students, 36.8% | 28 Students, 19.4% |
| E, F, W | 3 Students, 15.8% | 46 Students, 31.9% |

4. **Recommendations for Improvement:**

While the highlight of this assessment is the fact that students in the assessed classes that came for tutoring are much more likely to pass their class than to receive a grade of E, F, or withdraw, the main takeaway from this assessment is the fact that the vast majority of students taking BIO-101, CHM-100 and PHY-185 are not taking advantage of CLAC offered services.

To improve these numbers, we suggest targeting this cohort with a more direct approach including increasing internal marketing via social media, in-class services presentations, faculty outreach, postings in the Bergen Daily, notice in the portal, liaising with Pipeline to coordinate with students on academic probation, and more of a presence at student function in the Student Center.

- **Feedback from Vice President:**

## SEMESTER 4: CLOSING THE LOOP AND SHARING KNOWLEDGE

5. **Use of Results:**

- **Feedback from CIE:**

**APPENDIX**

**Table 1. Spring 2016 BIO-101 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 21 | 45.7% | 150 | 24.0% | 171 | 25.5% |
| B+ | 4 | 8.7% | 67 | 10.7% | 71 | 10.6% |
| B | 9 | 19.6% | 92 | 14.7% | 101 | 15.1% |
| C+ | 3 | 6.5% | 61 | 9.8% | 64 | 9.5% |
| C | 7 | 15.2% | 74 | 11.8% | 81 | 12.1% |
| D | 1 | 2.2% | 50 | 8.0% | 51 | 7.6% |
| E | 0 | 0.0% | 20 | 3.2% | 20 | 3.0% |
| F | 0 | 0.0% | 29 | 4.6% | 29 | 4.3% |
| W | 1 | 2.2% | 82 | 13.1% | 83 | 12.4% |
| **Total** | **46** | **100.0%** | **625** | **100.0%** | **671** | **100.0%** |

**Table 2. Summer 2016 BIO-101 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 4 | 22.2% | 70 | 34.0% | 74 | 33.0% |
| B+ | 4 | 22.2% | 31 | 15.0% | 35 | 15.6% |
| B | 1 | 5.6% | 46 | 22.3% | 47 | 21.0% |
| C+ | 3 | 16.7% | 15 | 7.3% | 18 | 8.0% |
| C | 3 | 16.7% | 17 | 8.3% | 20 | 8.9% |
| D | 3 | 16.7% | 7 | 3.4% | 10 | 4.5% |
| E | 0 | 0.0% | 5 | 2.4% | 5 | 2.2% |
| F | 0 | 0.0% | 9 | 4.4% | 9 | 4.0% |
| W | 0 | 0.0% | 6 | 2.9% | 6 | 2.7% |
| **Total** | **18** | **100.0%** | **206** | **100.0%** | **224** | **100.0%** |

**Table 3. Fall 2016 BIO-101 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 8 | 21.1% | 99 | 17.3% | 107 | 17.5% |
| B+ | 2 | 5.3% | 54 | 9.4% | 56 | 9.2% |
| B | 8 | 21.1% | 99 | 17.3% | 107 | 17.5% |
| C+ | 5 | 13.2% | 48 | 8.4% | 53 | 8.7% |
| C | 6 | 15.8% | 66 | 11.5% | 72 | 11.8% |
| D | 1 | 2.6% | 46 | 8.0% | 47 | 7.7% |
| E | 2 | 5.3% | 21 | 3.7% | 23 | 3.8% |
| F | 4 | 10.5% | 53 | 9.3% | 57 | 9.3% |
| W | 0 | 0.0% | 82 | 14.3% | 82 | 13.4% |
| N | 2 | 5.3% | 4 | 0.7% | 6 | 1.0% |
| **Total** | **38** | **100.0%** | **572** | **100.0%** | **610** | **100.0%** |

**Table 4. Spring 2016 CHM-100 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 33 | 29.5% | 176 | 31.9% | 209 | 31.5% |
| B+ | 16 | 14.3% | 69 | 12.5% | 85 | 12.8% |
| B | 16 | 14.3% | 103 | 18.7% | 119 | 17.9% |
| C+ | 6 | 5.4% | 35 | 6.4% | 41 | 6.2% |
| C | 17 | 15.2% | 55 | 10.0% | 72 | 10.9% |
| D | 11 | 9.8% | 12 | 2.2% | 23 | 3.5% |
| E | 1 | 0.9% | 10 | 1.8% | 11 | 1.7% |
| F | 3 | 2.7% | 24 | 4.4% | 27 | 4.1% |
| W | 9 | 8.0% | 67 | 12.2% | 76 | 11.5% |
| **Total** | **112** | **100.0%** | **551** | **100.0%** | **663** | **100.0%** |

**Table 5. Summer 2016 CHM-100 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 13 | 65.0% | 45 | 59.2% | 58 | 60.4% |
| B+ | 2 | 10.0% | 11 | 14.5% | 13 | 13.5% |
| B | 1 | 5.0% | 6 | 7.9% | 7 | 7.3% |
| C+ | 0 | 0.0% | 3 | 3.9% | 3 | 3.1% |
| C | 1 | 5.0% | 1 | 1.3% | 2 | 2.1% |
| D | 1 | 5.0% | 2 | 2.6% | 3 | 3.1% |
| E | 0 | 0.0% | 1 | 1.3% | 1 | 1.0% |
| F | 1 | 5.0% | 2 | 2.6% | 3 | 3.1% |
| W | 1 | 5.0% | 5 | 6.6% | 6 | 6.3% |
| **Total** | **20** | **100.0%** | **76** | **100.0%** | **96** | **100.0%** |

**Table 6. Fall 2016 CHM-100 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 24 | 26.1% | 160 | 30.0% | 184 | 29.4% |
| B+ | 18 | 19.6% | 63 | 11.8% | 81 | 13.0% |
| B | 18 | 19.6% | 81 | 15.2% | 99 | 15.8% |
| C+ | 8 | 8.7% | 36 | 6.8% | 44 | 7.0% |
| C | 11 | 12.0% | 40 | 7.5% | 51 | 8.2% |
| D | 4 | 4.3% | 21 | 3.9% | 25 | 4.0% |
| E | 2 | 2.2% | 24 | 4.5% | 26 | 4.2% |
| F | 4 | 4.3% | 39 | 7.3% | 43 | 6.9% |
| W | 2 | 2.2% | 66 | 12.4% | 68 | 10.9% |
| N | 1 | 1.1% | 3 | 0.6% | 4 | 0.6% |
| **Total** | **92** | **100.0%** | **533** | **100.0%** | **625** | **100.0%** |

**Table 7. Spring 2016 PHY-185 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 2 | 12.5% | 37 | 21.1% | 39 | 20.4% |
| B+ | 3 | 18.8% | 12 | 6.9% | 15 | 7.9% |
| B | 2 | 12.5% | 35 | 20.0% | 37 | 19.4% |
| C+ | 2 | 12.5% | 11 | 6.3% | 13 | 6.8% |
| C | 3 | 18.8% | 24 | 13.7% | 27 | 14.1% |
| D | 2 | 12.5% | 12 | 6.9% | 14 | 7.3% |
| E | 0 | 0.0% | 11 | 6.3% | 11 | 5.8% |
| F | 1 | 6.3% | 11 | 6.3% | 12 | 6.3% |
| W | 1 | 6.3% | 22 | 12.6% | 23 | 12.0% |
| **Total** | **16** | **100.0%** | **175** | **100.0%** | **191** | **100.0%** |

**Table 8. Summer 2016 PHY-185 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 1 | 50.0% | 20 | 34.5% | 21 | 35.0% |
| B+ | 0 | 0.0% | 8 | 13.8% | 8 | 13.3% |
| B | 0 | 0.0% | 18 | 31.0% | 18 | 30.0% |
| C+ | 0 | 0.0% | 3 | 5.2% | 3 | 5.0% |
| C | 0 | 0.0% | 5 | 8.6% | 5 | 8.3% |
| D | 0 | 0.0% | 1 | 1.7% | 1 | 1.7% |
| E | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| F | 0 | 0.0% | 3 | 5.2% | 3 | 5.0% |
| W | 1 | 50.0% | 0 | 0.0% | 1 | 1.7% |
| **Total** | **2** | **100.0%** | **58** | **100.0%** | **60** | **100.0%** |

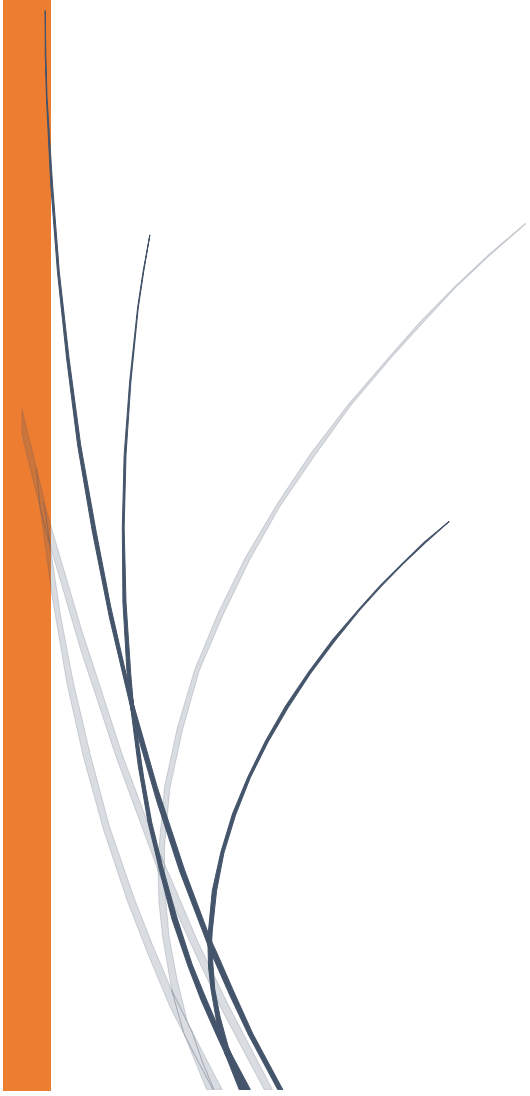
**Table 9. Fall 2016 PHY-185 Grades, Tutored Students vs Non-Tutored Students**

| Grade | Attended Tutoring | | Did Not Attend Tutoring | | Total | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A | 4 | 21.1% | 29 | 19.9% | 33 | 20.0% |
| B+ | 1 | 5.3% | 15 | 10.3% | 16 | 9.7% |
| B | 4 | 21.1% | 26 | 17.8% | 30 | 18.2% |
| C+ | 4 | 21.1% | 4 | 2.7% | 8 | 4.8% |
| C | 2 | 10.5% | 13 | 8.9% | 15 | 9.1% |
| D | 1 | 5.3% | 11 | 7.5% | 12 | 7.3% |
| E | 0 | 0.0% | 1 | 0.7% | 1 | 0.6% |
| F | 2 | 10.5% | 5 | 3.4% | 7 | 4.2% |
| W | 1 | 5.3% | 40 | 27.4% | 41 | 24.8% |
| N | 0 | 0.0% | 2 | 1.4% | 2 | 1.2% |
| **Total** | **19** | **100.0%** | **146** | **100.0%** | **165** | **100.0%** |

April 2017

# CLAC Science Tutoring Survey Report

Spring 2017



# INTRODUCTION

In Spring 2017, a 16-question survey was sent to students who had enrolled in either BIO-101, CHM-100, or PHY-185 in Spring 2016, Summer 2016 and/or Fall 2016. The objectives of the survey were to (1) ascertain which of these students received tutoring from the Cerullo Learning Assistance Center (CLAC) during these semesters for any of the above courses and to (2) learn about their experiences at the CLAC. On February 28th, 2017, an email with the survey link was sent to the Bergen email addresses of 2,560 students identified by the CLAC as meeting the above parameters for survey participation. As an incentive for survey completion, the respondents were told they would be entered into a drawing for two $25 Amazon gift cards. In total, 178 students responded to the survey for a 7% response rate. Table 1 below shows how many respondents indicated that they had received tutoring for BIO-101, CHM-100, or PHY-185 during the Spring 2016, Summer 2016 and/or Fall 2016 semesters. It also shows which respondents indicated they had not received any tutoring for these courses during the timeframe.

**Table 1. Did you go to the CLAC Tutoring Center for help with BIO-101, CHM-100, or PHY-185 in Spring 2016, Summer 2016 and/or Fall 2016?[1]**

| Went to CLAC for Help with: | # of Students |
|---|---|
| BIO-101 | 37 |
| CHM-100 | 35 |
| PHY-185 | 7 |
| None of the Above | 99 |

The majority of students who answered the survey did not receive any tutoring from the CLAC for the three courses during the timeframe (99 respondents). This report, however, will focus on the students who did receive tutoring and will be separated by the course for which they were tutored (BIO-101, n=37, CHM-100, n=35, PHY-185, n=7).

[1] This table is duplicated because the respondents could have gone to the CLAC for tutoring for multiple courses during the time period.

# BIO-101 (GENERAL BIOLOGY I) SURVEY RESPONSES

The respondents who indicated that they had received tutoring at the CLAC for BIO-101 in Spring 2016, Summer 2016 and/or Fall 2016 were asked to select how often they had worked on the following materials (frequency of use) and how helpful going over those materials were to understanding the subject matter (Helpfulness of Materials). Tables 2 – 8 show the responses to this question separated by materials used.

Attended Lecture Review was the most frequently worked on material with 27% of respondents saying they worked on it every session. Missed Lecture Review was the least frequently worked on material with 78% of respondents saying they never spent any session time reviewing it. Test Prep was the most helpful material to work on with 74% of respondents indicating that it was very helpful in understanding the subject matter. Missed Lecture Review was the least helpful material to work on with only 25% indicating that it was very helpful in understanding the subject matter.

**Table 2. Homework – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 4 | 16% |
| Most sessions | 4 | 16% |
| Some sessions | 5 | 20% |
| A few sessions | 6 | 24% |
| No sessions | 6 | 24% |
| **Total** | **25** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 10 | 63% |
| Somewhat helpful | 6 | 38% |
| Not helpful | 0 | 0% |
| **Total** | **16** | **100%** |

**Table 3. Test Prep – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 6 | 23% |
| Most sessions | 7 | 27% |
| Some sessions | 3 | 12% |
| A few sessions | 7 | 27% |
| No sessions | 3 | 12% |
| **Total** | **26** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 14 | 74% |
| Somewhat helpful | 5 | 26% |
| Not helpful | 0 | 0% |
| **Total** | **19** | **100%** |

**Table 4. Test Corrections and Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 12% |
| Most sessions | 2 | 8% |
| Some sessions | 5 | 20% |
| A few sessions | 3 | 12% |
| No sessions | 12 | 48% |
| **Total** | **25** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 6 | 55% |
| Somewhat helpful | 5 | 45% |
| Not helpful | 0 | 0% |
| **Total** | **11** | **100%** |

**Table 5. Prerequisite Material Refresh – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 4 | 17% |
| Most sessions | 1 | 4% |
| Some sessions | 4 | 17% |
| A few sessions | 7 | 30% |
| No sessions | 7 | 30% |
| **Total** | **23** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 10 | 67% |
| Somewhat helpful | 5 | 33% |
| Not helpful | 0 | 0% |
| **Total** | **15** | **100%** |

**Table 6. Lab Material Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 14% |
| Most sessions | 3 | 14% |
| Some sessions | 3 | 14% |
| A few sessions | 4 | 18% |
| No sessions | 9 | 41% |
| **Total** | **22** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 7 | 58% |
| Somewhat helpful | 5 | 42% |
| Not helpful | 0 | 0% |
| **Total** | **12** | **100%** |

**Table 7. Missed Lecture Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 4% |
| Most sessions | 0 | 0% |
| Some sessions | 2 | 9% |
| A few sessions | 2 | 9% |
| No sessions | 18 | 78% |
| **Total** | **23** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 1 | 25% |
| Somewhat helpful | 3 | 75% |
| Not helpful | 0 | 0% |
| **Total** | **4** | **100%** |

**Table 8. Attended Lecture Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 6 | 27% |
| Most sessions | 3 | 14% |
| Some sessions | 3 | 14% |
| A few sessions | 2 | 9% |
| No sessions | 8 | 36% |
| **Total** | **22** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 7 | 64% |
| Somewhat helpful | 4 | 36% |
| Not helpful | 0 | 0% |
| **Total** | **11** | **100%** |

Chart 1 shows how many students said they worked on the following materials every session. Six students said they worked on Test Prep every session and six students said they worked on Attended Lecture Review every session.

**Chart 1. Number of Students who worked on the following Materials Every Session**

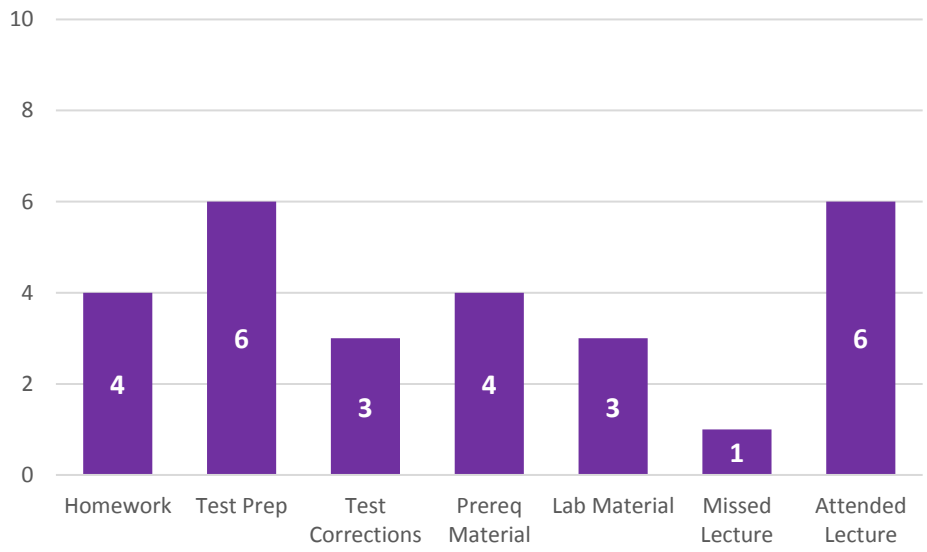
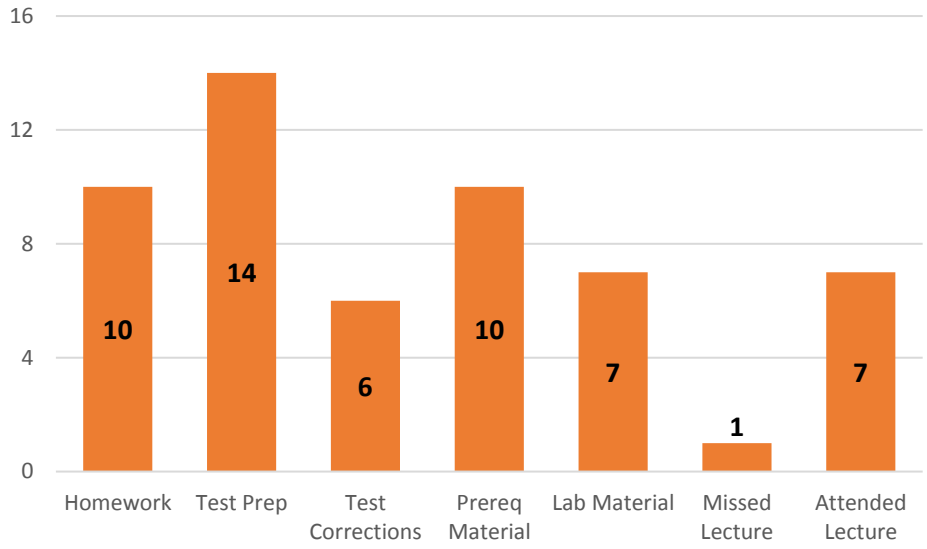


Chart 2 shows how many students said the following materials were very helpful to understanding the subject matter. Fourteen students said that going over Test Prep was very helpful to understanding the subject matter.

**Chart 2. Number of Students who said the following Materials were Very Helpful**




The respondents were then asked to indicate how often they had used the following resources (frequency of use) and how helpful utilizing these resources were to the understanding of the subject matter (helpfulness of resources). Tables 9 – 15 show the responses to this question separated by resources utilized.

The most frequently used resource was a textbook as 38% of respondents indicated utilizing one during every session. The least frequently used resources were microscopes and slides and torsos, only 10% of students indicated utilizing these resources every session. Although only a small number of respondents used it, 100% of those who utilized a chemistry model kit said it was very helpful to understanding the subject matter; making it the most helpful resource. Calculators were the least helpful resource as only 57% of respondents indicated that it was very helpful to understanding the subject matter.

**Table 9. Textbooks – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 9 | 38% |
| Most sessions | 3 | 13% |
| Some sessions | 3 | 13% |
| A few sessions | 5 | 21% |
| No sessions | 4 | 17% |
| **Total** | **24** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 12 | 80% |
| Somewhat helpful | 3 | 20% |
| Not helpful | 0 | 0% |
| **Total** | **15** | **100%** |

### Table 10. Calculators – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 4 | 17% |
| Most sessions | 2 | 9% |
| Some sessions | 1 | 4% |
| A few sessions | 1 | 4% |
| No sessions | 15 | 65% |
| **Total** | **23** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 3 | 60% |
| Somewhat helpful | 2 | 40% |
| Not helpful | 0 | 0% |
| **Total** | **5** | **100%** |

### Table 11. Chemistry Model Kits – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 14% |
| Most sessions | 1 | 5% |
| Some sessions | 1 | 5% |
| A few sessions | 1 | 5% |
| No sessions | 16 | 73% |
| **Total** | **22** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 4 | 100% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 0 | 0% |
| **Total** | **4** | **100%** |

### Table 12. Microscopes and Slides – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 10% |
| Most sessions | 3 | 14% |
| Some sessions | 1 | 5% |
| A few sessions | 3 | 14% |
| No sessions | 12 | 57% |
| **Total** | **21** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 4 | 57% |
| Somewhat helpful | 3 | 43% |
| Not helpful | 0 | 0% |
| **Total** | **7** | **100%** |

### Table 13. Torsos – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 10% |
| Most sessions | 2 | 10% |
| Some sessions | 1 | 5% |
| A few sessions | 1 | 5% |
| No sessions | 14 | 70% |
| **Total** | **20** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 2 | 67% |
| Somewhat helpful | 1 | 33% |
| Not helpful | 0 | 0% |
| **Total** | **3** | **100%** |

**Table 14. Skeletons – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 4 | 19% |
| Most sessions | 2 | 10% |
| Some sessions | 2 | 10% |
| A few sessions | 2 | 10% |
| No sessions | 11 | 52% |
| **Total** | **21** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 4 | 57% |
| Somewhat helpful | 3 | 43% |
| Not helpful | 0 | 0% |
| **Total** | **7** | **100%** |

**Table 15. Small Whiteboards – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 4 | 20% |
| Most sessions | 2 | 10% |
| Some sessions | 2 | 10% |
| A few sessions | 1 | 5% |
| No sessions | 11 | 55% |
| **Total** | **20** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 5 | 71% |
| Somewhat helpful | 2 | 29% |
| Not helpful | 0 | 0% |
| **Total** | **7** | **100%** |

Chart 3 shows how many students said they used the following resources during every session. Nine students indicated that they had used a textbook during every session.

**Chart 3. Number of Students who used the following Resources Every Session**

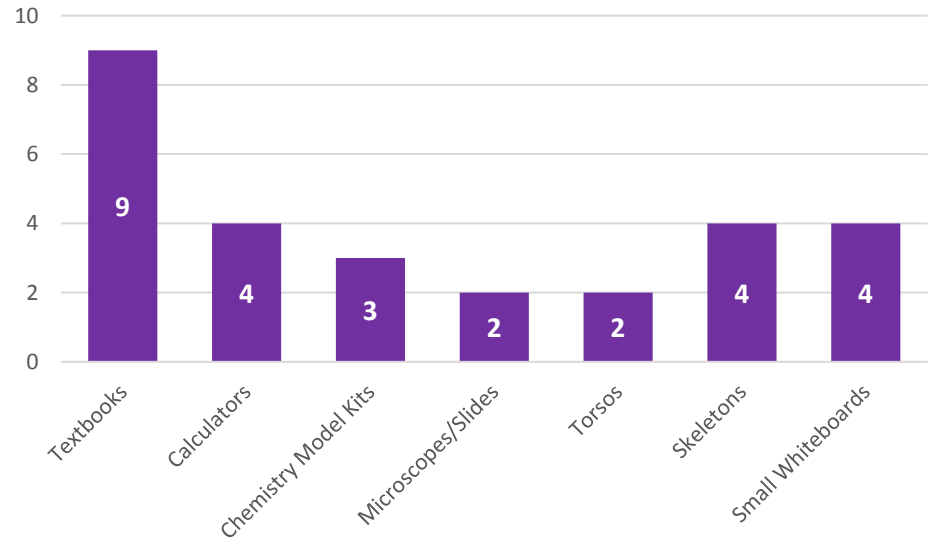
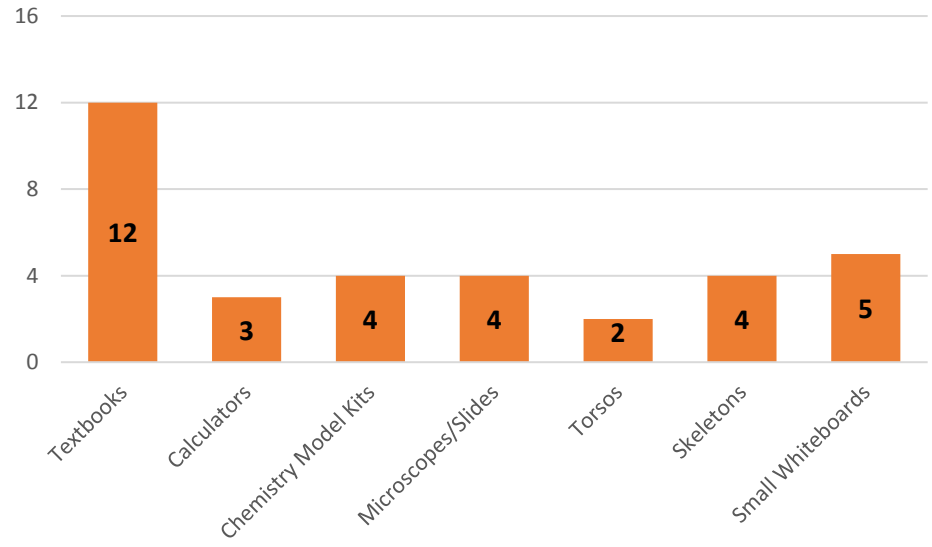


Chart 4 shows how many students said that using the following resources were very helpful to understanding the subject matter. Twelve students indicated that using textbooks during tutoring was very helpful to understanding the subject matter.

**Chart 4. Number of Students who used the following Resources were Very Helpful**




The students were asked to indicate how helpful tutoring was in their overall performance in BIO-101. Table 16 shows the results of this question below. Over 60% of respondents said that tutoring was very helpful in their overall performance in BIO-101 (62%).

**Table 16. How helpful was tutoring in your overall performance in BIO-101?**

| Overall Helpfulness | # | % |
|---|---|---|
| Very helpful | 16 | 62% |
| Somewhat helpful | 9 | 35% |
| Not helpful | 1 | 4% |
| **Total** | **26** | **100%** |

Finally, the students were asked to leave any additional comments they might have concerning their tutoring experience for BIO-101. The responses are inscribed below verbatim.

- I liked what I saw they were all very good and also very interesting as well thank you very much a lot ok
- I was denied a tutor this semester for EKG. That would be under the category for anatomy and physiology functions of the heart. I am extremely dissatisfied that Bergen would even consider denying a student education.

# CHM-101 (INTRODUCTION TO CHEMISTRY) SURVEY RESPONSES

The respondents who indicated that they had received tutoring at the CLAC for CHM-100 in Spring 2016, Summer 2016 and/or Fall 2016 were asked to select how often they had worked on the following materials (frequency of use) and how helpful going over those materials were to understanding the subject matter (Helpfulness of Materials). Tables 17 – 23 show the responses to this question separated by materials used.

The most frequently worked on material was Test Prep with 36% of respondents indicating that they worked on Test Prep during every session. Missed Lecture Review was the least frequently worked on material as only 9% of respondents indicated working on it every session and 68% of respondents indicated never working on it during a session. Prerequisite Material Refresh was the most helpful material to go over as 88% of respondents indicated it was very helpful to them understanding the subject matter. Test Corrections and Review and Lab Material Review were the least helpful materials to go over as only 50% of respondents indicated both as very helpful to understanding the subject matter.

**Table 17. Homework – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 5 | 19% |
| Most sessions | 4 | 15% |
| Some sessions | 4 | 15% |
| A few sessions | 8 | 31% |
| No sessions | 5 | 19% |
| **Total** | **26** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 10 | 77% |
| Somewhat helpful | 3 | 23% |
| Not helpful | 0 | 0% |
| **Total** | **13** | **100%** |

**Table 18. Test Prep – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 9 | 36% |
| Most sessions | 4 | 16% |
| Some sessions | 3 | 12% |
| A few sessions | 9 | 36% |
| No sessions | 0 | 0% |
| **Total** | **25** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 13 | 81% |
| Somewhat helpful | 3 | 19% |
| Not helpful | 0 | 0% |
| **Total** | **16** | **100%** |

**Table 19. Test Corrections and Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 4 | 17% |
| Most sessions | 3 | 13% |
| Some sessions | 3 | 13% |
| A few sessions | 5 | 21% |
| No sessions | 9 | 38% |
| **Total** | **24** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 4 | 50% |
| Somewhat helpful | 4 | 50% |
| Not helpful | 0 | 0% |
| **Total** | **8** | **100%** |

**Table 20. Prerequisite Material Refresh – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 14% |
| Most sessions | 2 | 9% |
| Some sessions | 1 | 5% |
| A few sessions | 6 | 27% |
| No sessions | 10 | 45% |
| **Total** | **22** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 7 | 88% |
| Somewhat helpful | 1 | 13% |
| Not helpful | 0 | 0% |
| **Total** | **8** | **100%** |

**Table 21. Lab Material Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 14% |
| Most sessions | 2 | 9% |
| Some sessions | 1 | 5% |
| A few sessions | 5 | 23% |
| No sessions | 11 | 50% |
| **Total** | **22** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 4 | 50% |
| Somewhat helpful | 4 | 50% |
| Not helpful | 0 | 0% |
| **Total** | **8** | **100%** |

**Table 22. Missed Lecture Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 9% |
| Most sessions | 1 | 5% |
| Some sessions | 4 | 18% |
| A few sessions | 0 | 0% |
| No sessions | 15 | 68% |
| **Total** | **22** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 3 | 60% |
| Somewhat helpful | 1 | 20% |
| Not helpful | 1 | 20% |
| **Total** | **5** | **100%** |

**Table 23. Attended Lecture Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 5 | 23% |
| Most sessions | 2 | 9% |
| Some sessions | 1 | 5% |
| A few sessions | 4 | 18% |
| No sessions | 10 | 45% |
| **Total** | **22** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 6 | 67% |
| Somewhat helpful | 2 | 22% |
| Not helpful | 1 | 11% |
| **Total** | **9** | **100%** |

Chart 5 shows how many students said they worked on the following materials every session. Nine students admitted that they worked on Test Prep every tutoring session.

**Chart 5. Number of Students who worked on the following Materials Every Session**

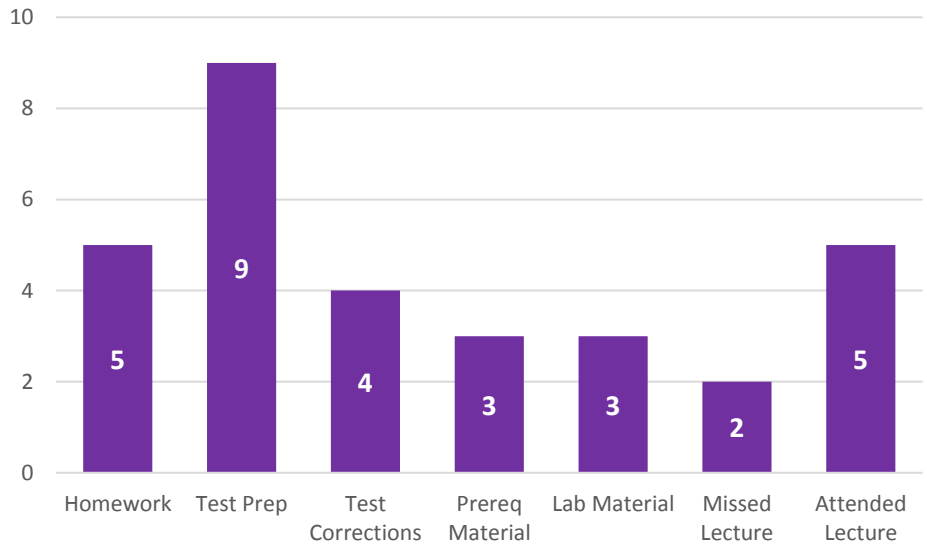
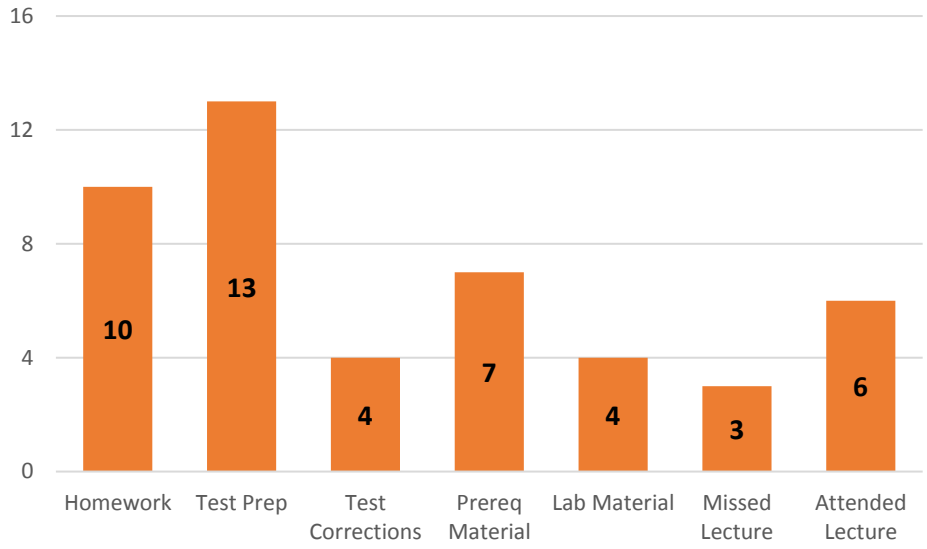


Chart 6 shows how many students said that the following materials were very helpful to understanding the subject matter. Thirteen students admitted that going over Test Prep in tutoring was very helpful to understanding CHM-100.

**Chart 6. Number of Students who said the following Materials were Very Helpful**




The respondents were then asked to indicate how often they had used the following resources (frequency of use) and how helpful utilizing these resources were to the understanding of the subject matter (helpfulness of resources). Tables 24 – 30 show the responses to this question separated by resources utilized.

The most frequently used resource was a calculator as 29% of respondents indicated utilizing one during every session. The least frequently used resources were microscopes and slides, torsos, and skeletons as only 5% of students indicated utilizing these resources every session. Chemistry model kits were the most helpful resource as 71% of respondents indicated that it was very helpful in understanding the subject matter. Textbooks were the least helpful resource as only 50% of respondents indicated that it was very helpful to understanding the subject matter.

**Table 24. Textbooks – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 7 | 28% |
| Most sessions | 4 | 16% |
| Some sessions | 7 | 28% |
| A few sessions | 5 | 20% |
| No sessions | 2 | 8% |
| **Total** | **25** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 7 | 50% |
| Somewhat helpful | 5 | 36% |
| Not helpful | 2 | 14% |
| **Total** | **14** | **100%** |

### Table 25. Calculators – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 7 | 29% |
| Most sessions | 7 | 29% |
| Some sessions | 3 | 13% |
| A few sessions | 4 | 17% |
| No sessions | 3 | 13% |
| **Total** | **24** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 6 | 55% |
| Somewhat helpful | 5 | 45% |
| Not helpful | 0 | 0% |
| **Total** | **11** | **100%** |

### Table 26. Chemistry Model Kits – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 13% |
| Most sessions | 2 | 9% |
| Some sessions | 3 | 13% |
| A few sessions | 1 | 4% |
| No sessions | 14 | 61% |
| **Total** | **23** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 5 | 71% |
| Somewhat helpful | 1 | 14% |
| Not helpful | 1 | 14% |
| **Total** | **7** | **100%** |

### Table 27. Microscopes and Slides – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 5% |
| Most sessions | 1 | 5% |
| Some sessions | 2 | 9% |
| A few sessions | 1 | 5% |
| No sessions | 17 | 77% |
| **Total** | **22** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 3 | 60% |
| Somewhat helpful | 2 | 40% |
| Not helpful | 0 | 0% |
| **Total** | **5** | **100%** |

### Table 28. Torsos – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 5% |
| Most sessions | 1 | 5% |
| Some sessions | 1 | 5% |
| A few sessions | 1 | 5% |
| No sessions | 18 | 82% |
| **Total** | **22** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 2 | 67% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 1 | 33% |
| **Total** | **3** | **100%** |

**Table 29. Skeletons – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 5% |
| Most sessions | 0 | 0% |
| Some sessions | 1 | 5% |
| A few sessions | 2 | 9% |
| No sessions | 18 | 82% |
| **Total** | **22** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 2 | 67% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 1 | 33% |
| **Total** | **3** | **100%** |

**Table 30. Small Whiteboards – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 14% |
| Most sessions | 1 | 5% |
| Some sessions | 5 | 23% |
| A few sessions | 6 | 27% |
| No sessions | 7 | 32% |
| **Total** | **22** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 6 | 55% |
| Somewhat helpful | 5 | 45% |
| Not helpful | 0 | 0% |
| **Total** | **11** | **100%** |

Chart 7 shows how many students said they used the following resources during every session. Seven students indicated that they had used a textbook and a calculator during every session.

**Chart 7. Number of Students who used the following Resources Every Session**

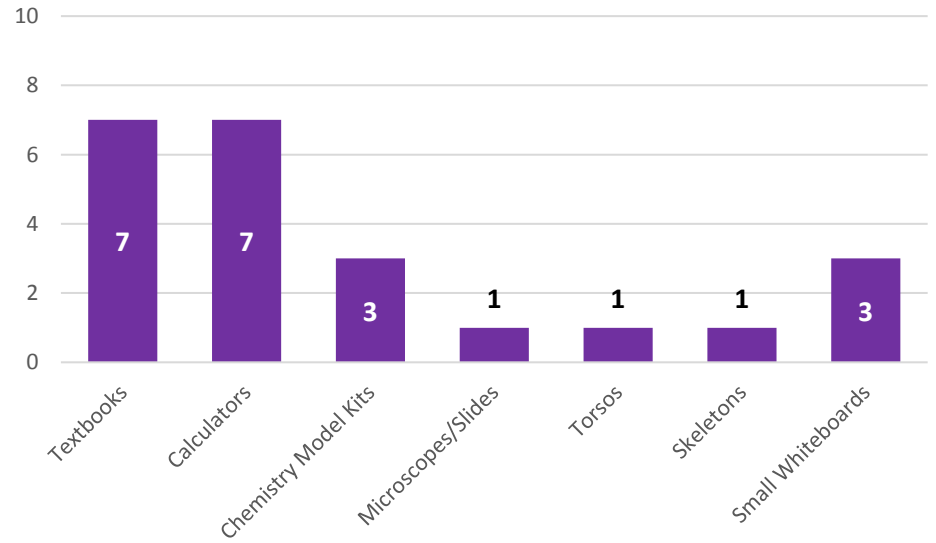
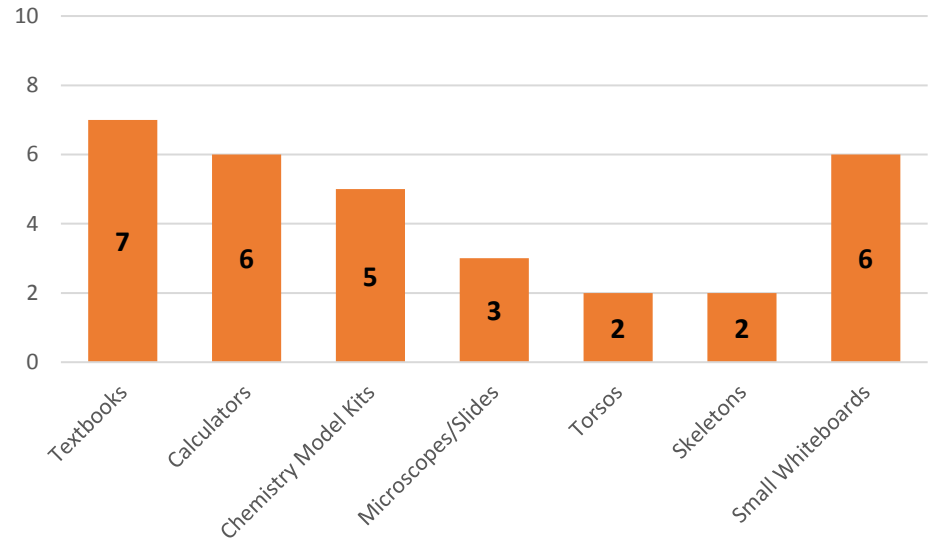


Chart 8 shows how many students said that using the following resources were very helpful to understanding the subject matter. Seven students indicated that using textbooks during tutoring was very helpful to understanding the subject matter.

**Chart 8. Number of Students who used the following Resources were Very Helpful**




The students were asked to indicate how helpful tutoring was in their overall performance in CHM-100. Table 31 shows the results of this question below. Three-quarters of respondents said that tutoring was very helpful in their overall performance in CHM-100.

**Table 31. How helpful was tutoring in your overall performance in CHM-100?**

| Overall Helpfulness | # | % |
|---|---|---|
| Very helpful | 21 | 75% |
| Somewhat helpful | 6 | 21% |
| Not helpful | 1 | 4% |
| **Total** | **28** | **100%** |

Finally, the students were asked to leave any additional comments they might have concerning their tutoring experience for CHM-100. The responses are inscribed below verbatim.

- Unfortunately wasn't helpful, a couple of guys check and specific problem and finally I solved it by myself
- My tutoring sessions always go great. My tutors have been patient with me and always break things down in an easy basic way.
- I was satisfied with everything. The tutors were very kind. They know how to teach us. Thank you.
- I liked what I saw they were all very good and also very interesting as well thank you very much a lot ok

- I had Diego as my chemistry tutor and he was very helpful by helping me understand polytamic ions in stuff.
- I frequent the tutoring center quite often. There are some tutors that can make any convoluted material very clear. However, there have been a few tutors that made me feel more confused than before I walked in there.
- Be nicer
- All the tutors were very nice, and the people who booked the appointments were always as accommodating as possible.

# PHY-185 (INTRODUCTION TO PHYSICS) SURVEY RESPONSES

The respondents who indicated that they had received tutoring at the CLAC for PHY-185 in Spring 2016, Summer 2016 and/or Fall 2016 were asked to select how often they had worked on the following materials (frequency of use) and how helpful going over those materials were to understanding the subject matter (Helpfulness of Materials). Tables 32 – 39 show the responses to this question separated by materials used.

The most frequently worked on material was Homework with 43% of respondents indicating that they worked on it during every session. Prerequisite material refresh was the least frequently worked on material as no respondents indicated working on it every session. Attended Lecture Review was the most helpful material to go over as 100% of respondents indicated it was very helpful to them understanding the subject matter. Lab Material Review was the least helpful material to go over as only 33% of respondents indicated it as very helpful to understanding the subject matter.

**Table 32. Homework – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 3 | 43% |
| Most sessions | 0 | 0% |
| Some sessions | 2 | 29% |
| A few sessions | 1 | 14% |
| No sessions | 1 | 14% |
| **Total** | **7** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 5 | 83% |
| Somewhat helpful | 1 | 17% |
| Not helpful | 0 | 0% |
| **Total** | **6** | **100%** |

**Table 33. Test Prep – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 29% |
| Most sessions | 2 | 29% |
| Some sessions | 1 | 14% |
| A few sessions | 2 | 29% |
| No sessions | 0 | 0% |
| **Total** | **7** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 6 | 86% |
| Somewhat helpful | 1 | 14% |
| Not helpful | 0 | 0% |
| **Total** | **7** | **100%** |

**Table 34. Test Corrections and Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 17% |
| Most sessions | 0 | 0% |
| Some sessions | 3 | 50% |
| A few sessions | 1 | 17% |
| No sessions | 1 | 17% |
| **Total** | **6** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 4 | 80% |
| Somewhat helpful | 1 | 20% |
| Not helpful | 0 | 0% |
| **Total** | **5** | **100%** |

**Table 35. Prerequisite Material Refresh – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 0 | 0% |
| Most sessions | 0 | 0% |
| Some sessions | 2 | 33% |
| A few sessions | 2 | 33% |
| No sessions | 2 | 33% |
| **Total** | **6** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 2 | 50% |
| Somewhat helpful | 2 | 50% |
| Not helpful | 0 | 0% |
| **Total** | **4** | **100%** |

**Table 36. Lab Material Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 14% |
| Most sessions | 2 | 29% |
| Some sessions | 2 | 29% |
| A few sessions | 1 | 14% |
| No sessions | 1 | 14% |
| **Total** | **7** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 2 | 33% |
| Somewhat helpful | 4 | 67% |
| Not helpful | 0 | 0% |
| **Total** | **6** | **100%** |

**Table 37. Missed Lecture Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 1 | 17% |
| Most sessions | 0 | 0% |
| Some sessions | 2 | 33% |
| A few sessions | 2 | 33% |
| No sessions | 1 | 17% |
| **Total** | **6** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 2 | 40% |
| Somewhat helpful | 3 | 60% |
| Not helpful | 0 | 0% |
| **Total** | **5** | **100%** |

**Table 38. Attended Lecture Review – Frequency of Use and Helpfulness of Materials**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 33% |
| Most sessions | 0 | 0% |
| Some sessions | 2 | 33% |
| A few sessions | 0 | 0% |
| No sessions | 2 | 33% |
| **Total** | **6** | **100%** |

| Helpfulness of Materials | # | % |
|---|---|---|
| Very helpful | 4 | 100% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 0 | 0% |
| **Total** | **4** | **100%** |

Chart 9 shows how many students said they worked on the following materials every session. Three students admitted that they worked on Homework every tutoring session.

**Chart 9. Number of Students who worked on the following Materials Every Session**

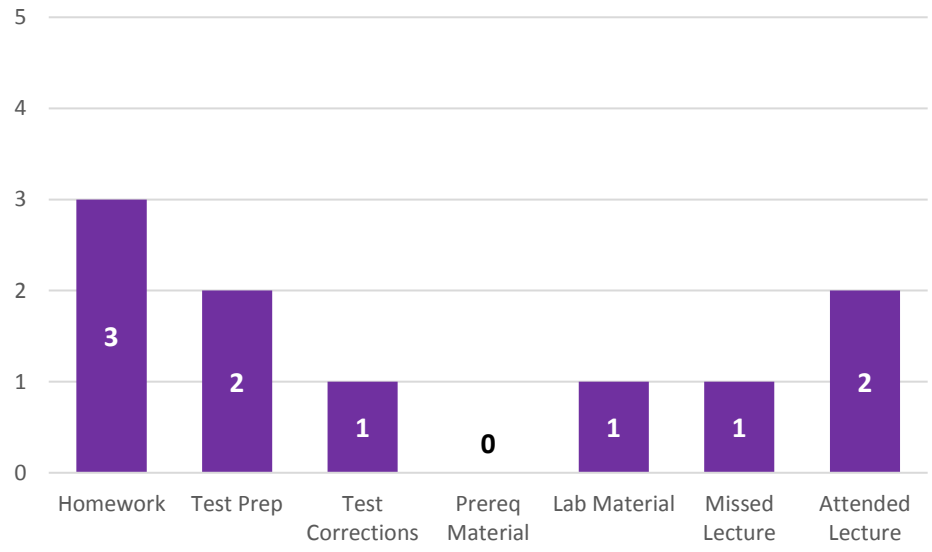
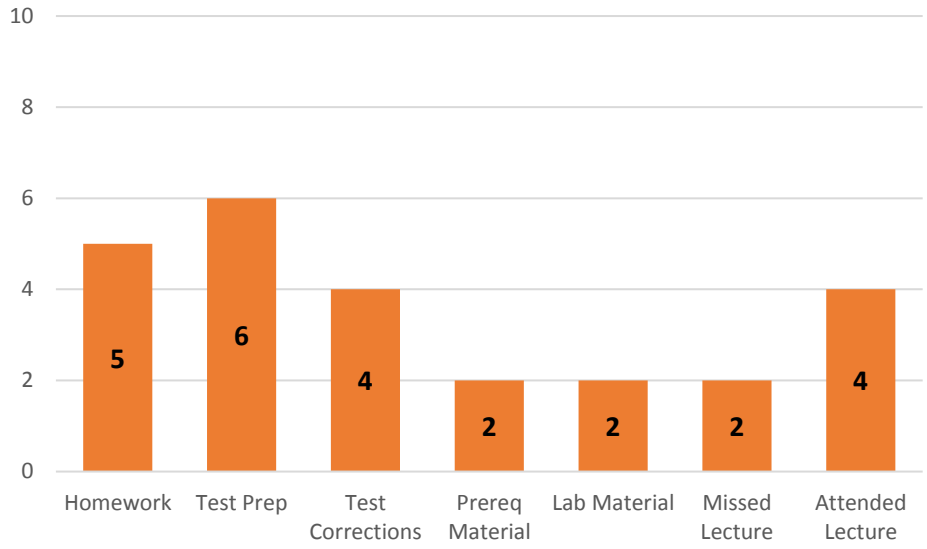


Chart 10 shows how many student said that the following materials were very helpful to understanding the subject matter. Six students admitted that going over Test Prep in tutoring was very helpful to understanding PHY-185.

**Chart 10. Number of Students who said the following Materials were Very Helpful**




The respondents were then asked to indicate how often they had used the following resources (frequency of use) and how helpful utilizing these resources were to the understanding of the subject matter (helpfulness of resources). Tables 39 – 45 show the responses to this question separated by resources utilized.

The most frequently used resource was a calculator as 33% of respondents indicated utilizing one during every session. No students utilized Torsos or Skeletons in any tutoring session. Calculators were the most helpful resource as 100% of respondents indicated that it was very helpful in understanding the subject matter.

**Table 39. Textbooks – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 29% |
| Most sessions | 1 | 14% |
| Some sessions | 2 | 29% |
| A few sessions | 1 | 14% |
| No sessions | 1 | 14% |
| **Total** | **7** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 4 | 67% |
| Somewhat helpful | 2 | 33% |
| Not helpful | 0 | 0% |
| **Total** | **6** | **100%** |

### Table 40. Calculators – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 2 | 33% |
| Most sessions | 1 | 17% |
| Some sessions | 1 | 17% |
| A few sessions | 0 | 0% |
| No sessions | 2 | 33% |
| **Total** | **6** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 4 | 100% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 0 | 0% |
| **Total** | **4** | **100%** |

### Table 41. Chemistry Model Kits – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 0 | 0% |
| Most sessions | 0 | 0% |
| Some sessions | 1 | 17% |
| A few sessions | 0 | 0% |
| No sessions | 5 | 83% |
| **Total** | **6** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 1 | 100% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 0 | 0% |
| **Total** | **1** | **100%** |

### Table 42. Microscopes and Slides – Frequency of Use and Helpfulness of Resources

| Frequency of Use | # | % |
|---|---|---|
| Every session | 0 | 0% |
| Most sessions | 0 | 0% |
| Some sessions | 1 | 17% |
| A few sessions | 0 | 0% |
| No sessions | 5 | 83% |
| **Total** | **6** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 1 | 100% |
| Somewhat helpful | 0 | 0% |
| Not helpful | 0 | 0% |
| **Total** | **1** | **100%** |

### Table 43. Torsos – Frequency of Use

| Frequency of Use | # | % |
|---|---|---|
| Every session | 0 | 0% |
| Most sessions | 0 | 0% |
| Some sessions | 0 | 0% |
| A few sessions | 0 | 0% |
| No sessions | 6 | 100% |
| **Total** | **6** | **100%** |

**Table 44. Skeletons – Frequency of Use**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 0 | 0% |
| Most sessions | 0 | 0% |
| Some sessions | 0 | 0% |
| A few sessions | 0 | 0% |
| No sessions | 6 | 100% |
| **Total** | **6** | **100%** |

**Table 45. Small Whiteboards – Frequency of Use and Helpfulness of Resources**

| Frequency of Use | # | % |
|---|---|---|
| Every session | 0 | 0% |
| Most sessions | 1 | 17% |
| Some sessions | 1 | 17% |
| A few sessions | 0 | 0% |
| No sessions | 4 | 67% |
| **Total** | **6** | **100%** |

| Helpfulness of Resources | # | % |
|---|---|---|
| Very helpful | 0 | 0% |
| Somewhat helpful | 2 | 100% |
| Not helpful | 0 | 0% |
| **Total** | **2** | **100%** |

Chart 11 shows how many students said they used the following resources during every session. Two students indicated that they had used a textbook and a calculator during every session.

**Chart 11. Number of Students who used the following Resources Every Session**

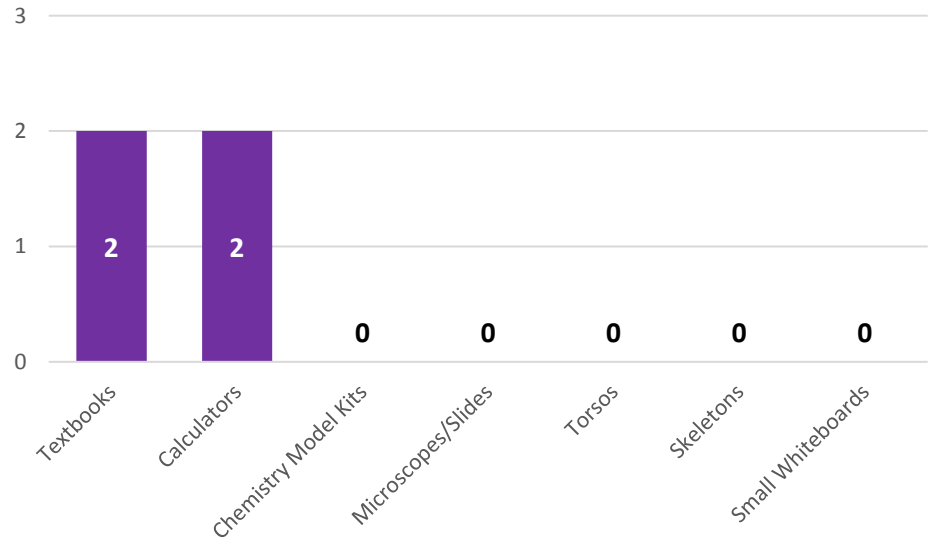
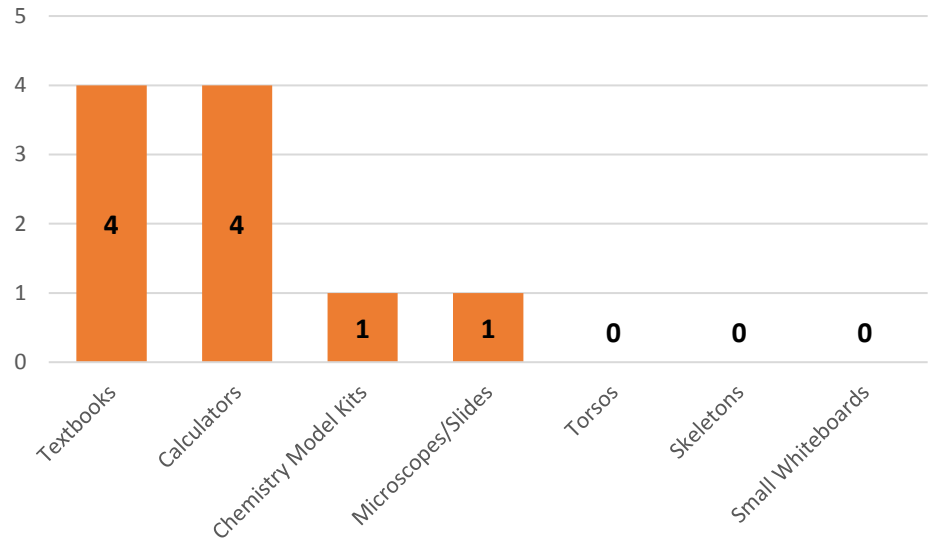


Chart 12 shows how many students said that using the following resources were very helpful to understanding the subject matter. Four students indicated that using textbooks and calculators during tutoring was very helpful to understanding the subject matter.

**Chart 12. Number of Students who used the following Resources were Very Helpful**




The students were asked to indicate how helpful tutoring was in their overall performance in PHY-185. Table 46 shows the results of this question below. Over 70% of respondents said that tutoring was very helpful in their overall performance in PHY-185 (71%).

**Table 46. How helpful was tutoring in your overall performance in PHY-185?**

| Overall Helpfulness | # | % |
|---|---|---|
| Very helpful | 5 | 71% |
| Somewhat helpful | 2 | 29% |
| Not helpful | 0 | 0% |
| **Total** | **7** | **100%** |

Finally, the students were asked to leave any additional comments they might have concerning their tutoring experience for PHY-185. The responses are inscribed below verbatim.

- Possibly making longer sessions