



CARE Spring 2021

March 2021 Report

Created by Alex Garcia & Mary Rose Farruggio

April 3, 2021

Contents

1	General Overview	2
2	User Information	3
3	Courses	4
4	Weekly Trends	6
4.1	Sunday	7
4.2	Monday	7
4.3	Tuesday	8
4.4	Wednesday	8
4.5	Thursday	9
4.6	Friday	9
4.7	Saturday	10
5	Exam Review Sessions	11
5.1	Math 220	11
5.2	Math 231	12
5.3	Math 241	12
5.4	Math 285	13
5.5	Phys 211	13
5.6	Phys 212	14
5.7	Phys 214	14

1 General Overview

CARE hosts several hours of walk-in tutoring every single day of the week. So far, in the months of January, February, and March CARE users have asked our tutors 1,238 questions total. CARE, in the month of March, has helped 188 Illinois students with a wide variety of Math, Physics, Computer Science, and Engineering Courses. This report breaks down these user's traffic patterns as well as what they were asking. None of these numbers are exact due to filtering of Queue entries, a general error-bar of ± 5 is appropriate for all of the metrics.

This report compiles the data on the users per month, the courses CARE supports, as well as the general trends of our weekly walk-in sessions. The below table summarizes some of the data, which is gone into more depth later in the report.

	Information on the Users
Total questions Mar '21	702
Total users Mar '21	188
Total questions per user Mar '21	3.73
	Information on Courses
Top 5 Courses	CS101 - 137 ECE110 - 119 PHYS211 - 105 MATH241 - 85 PHYS212 - 73
	Information on Weekday
Busiest Day	Monday
Least Busy Day	Friday
	<u>Busiest Hour Everyday</u>
Sunday	12:00 - 1:00 PM*
Monday	8:00 - 9:00 PM
Tuesday	6:00 - 7:00 PM
Wednesday	6:00 - 7:00 PM
Thursday	6:00 - 7:00 PM*
Friday	3:00 - 4:00 PM*
Saturday	3:00 - 4:00 PM*
	Information on Review Sessions
Highest Attendance	Phys 214 - 81
Highest Average Attendance	Phys 214 - 16.2
Lowest Attendance	Math 241 - 9
Lowest Average Attendance	Math 220 - 3.25

* denotes same as February

Table 1: Summary of data analyzed

Interestingly enough, it seems that our walk-in space sees more math questions, but the exam review sessions generally see more physics traffic. This could be for a number of reasons, but one possible explanation is that physics professors advertise CARE exam review sessions more frequently than math professors.

2 User Information

As previously mentioned, CARE logged over 700 questions in the month of February by over 180 students. Both of these values are significant increases compared to the month of February (480+ questions by 140+ users). The below figures show the trend by month.

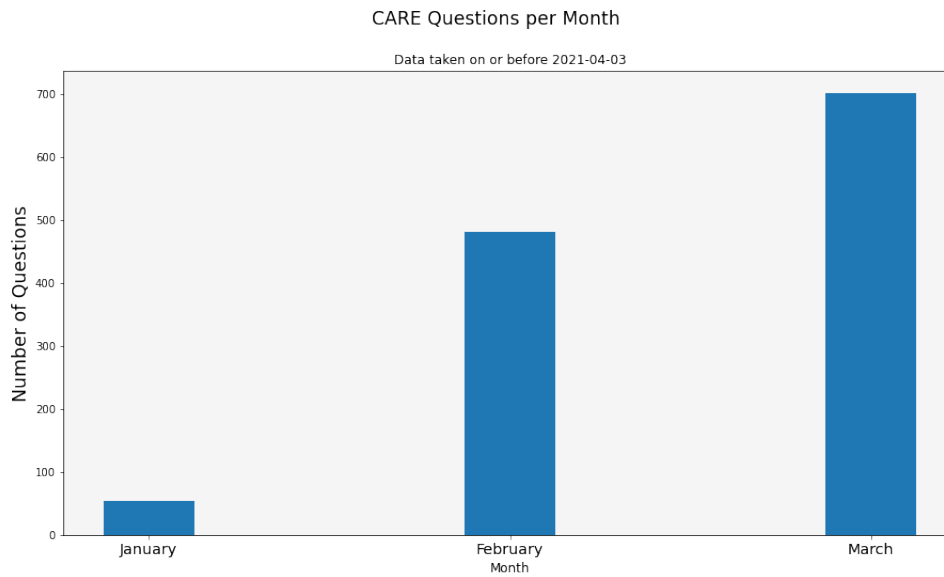


Figure 1: Number of questions by month

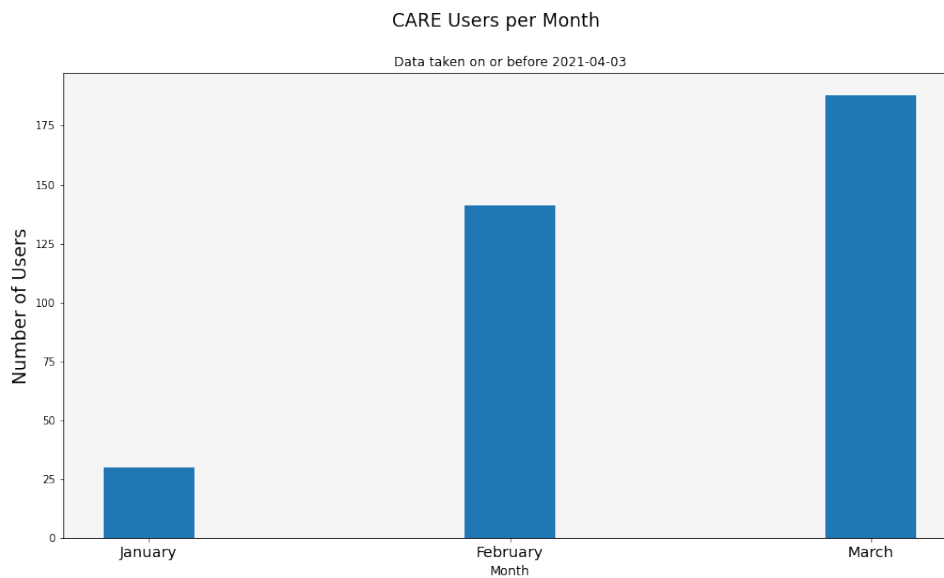


Figure 2: Number of users by month

From both of these values, we can obtain the average number of questions by a user over a given month. For February, each student, on average, asked 3.73 questions to our tutors. This is up from February (3.41 questions per user), again mostly because walk-in tutoring began at the end of the month. The below figure demonstrates this relation, by month.

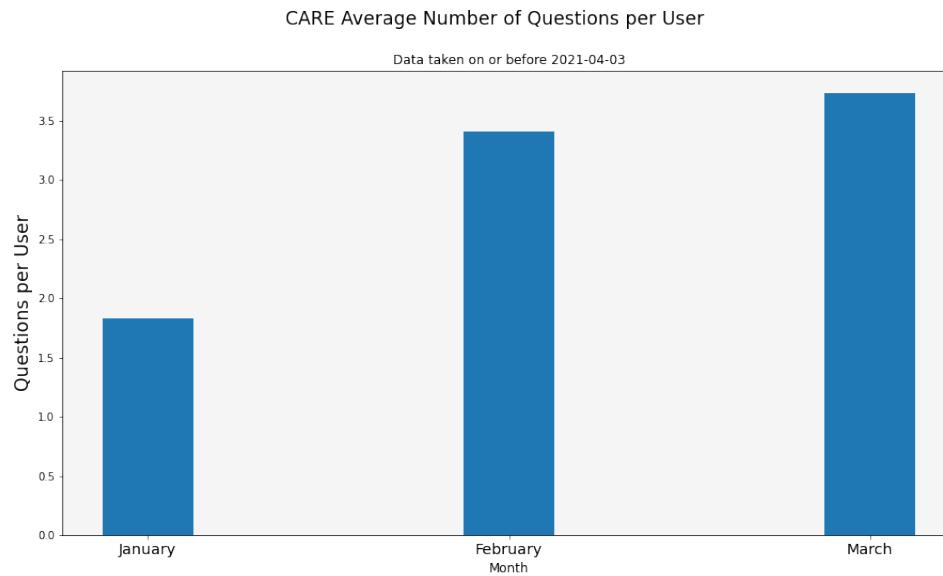


Figure 3: Number of questions per user by month

3 Courses

CARE tutors help students in a wide variety of subjects and courses. So far, during the Spring 2021 semester, our tutors have helped students with 48 different classes. The subjects of these classes range from Calculus I to 400-level engineering courses and everything in between. The below figure shows a histogram of all the courses we get questions for with the ten most popular courses listed on the side (Table 2).

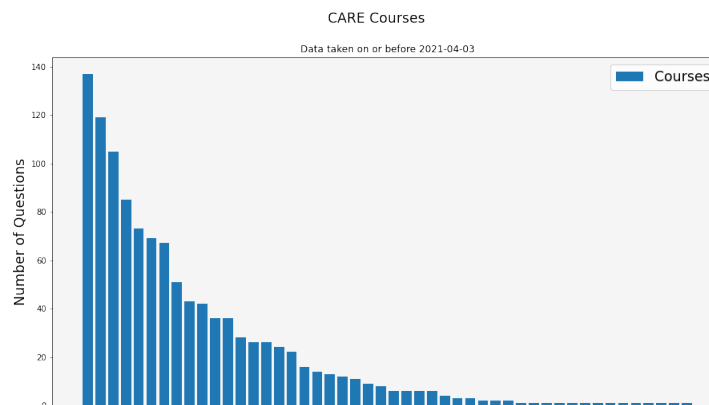


Figure 4: All courses

Course	<i>Number of questions</i>	Course	<i>Number of questions</i>
CS 101	137	Math 415	69
ECE 110	119	TAM 211	67
Phys 211	105	TAM 212	51
Math 241	85	Math 285	43
Phys 212	73	ECE 210	42

Table 2: Top ten most supported courses

Breaking this down, we can look at the most supported *departments* by our CARE tutors. By department, we simply mean the name of the course, i.e. ‘Phys’ or ‘Math’. As we can see from the figure below, the five most popular departments (Math, Electrical and Computer Engineering, Physics, Computer Science, and Theoretical and Applied Mechanics, in that order) are dominant compared to the others.

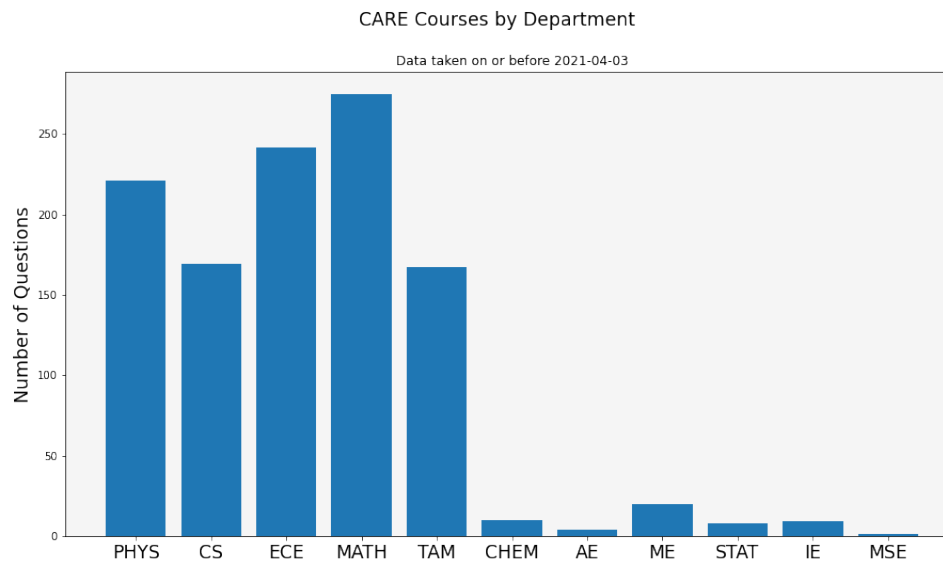


Figure 5: Questions by Department

Department	<i>Number of Questions</i>
Math	275
ECE	242
Phys	221
CS	169
TAM	167

Table 3: Number of questions of top five departments

4 Weekly Trends

CARE supports walk-in tutoring every day of the week during the afternoon. Most days, CARE is open 12 hours with most tutors changing shifts every 2 hours on the even numbered hours. The following analysis was done over the entire semester up to this point. The following figure shows our weekly trends broken down by day.

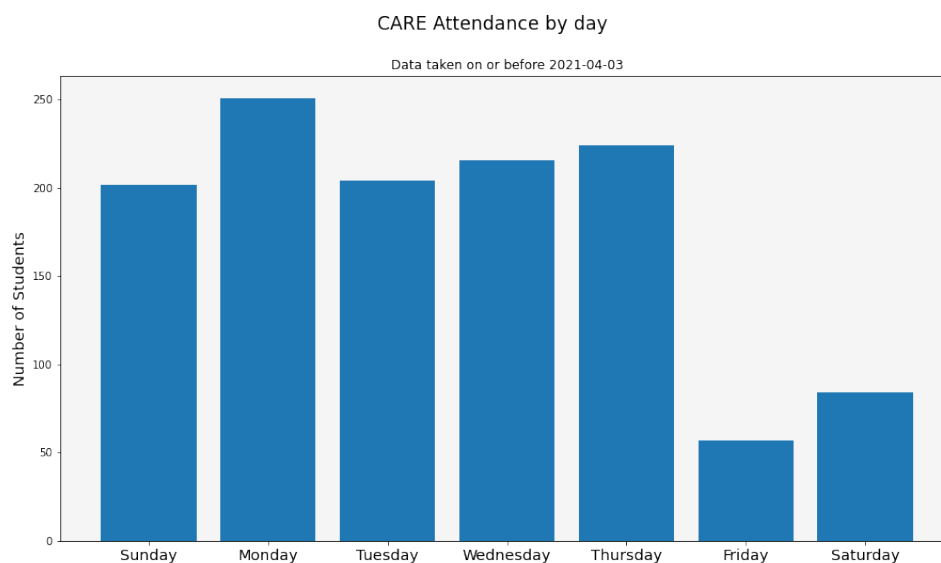


Figure 6: Questions by day

As we can see by Figure 6, Monday is the busiest day and Friday is the least busy day for CARE.

We can break down this information further by looking at each of these days in thirty minute intervals. This helps us get a better sense of what our hourly traffic looks like. Each following subsection represents one day's attendance, summarized with the following table.

Day	Number of Questions	Busiest Hour
Sunday	202	12:00 - 1:00 PM
Monday	251	8:00 - 9:00 PM
Tuesday	204	6:00 - 7:00 PM
Wednesday	216	6:00 - 7:00 PM
Thursday	224	6:00 - 7:00 PM
Friday	57	3:00 - 4:00 PM
Saturday	84	3:00 - 4:00 PM

Table 4: Summary of weekly findings

4.1 Sunday

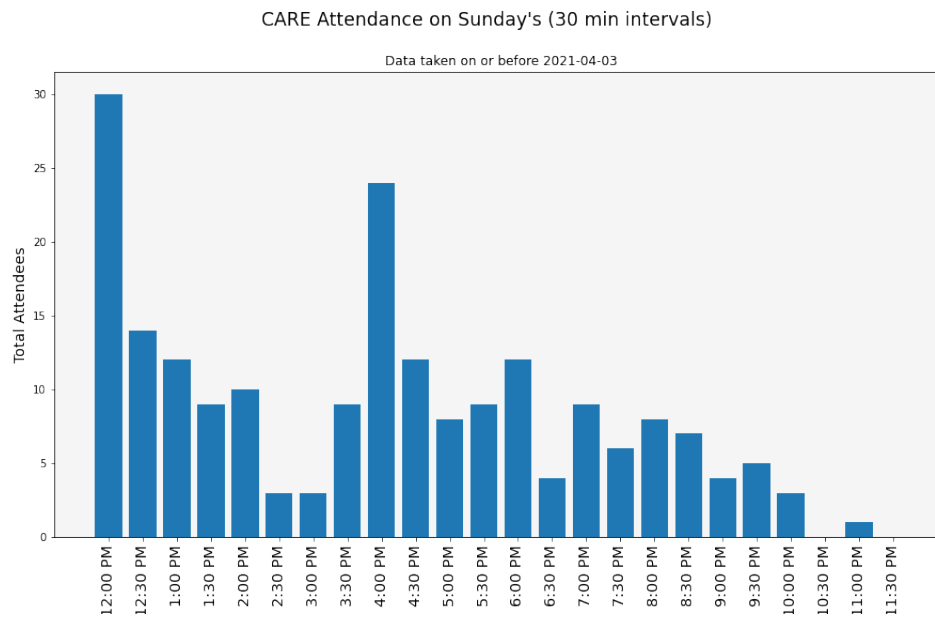


Figure 7: Traffic by Hour on Sunday

4.2 Monday

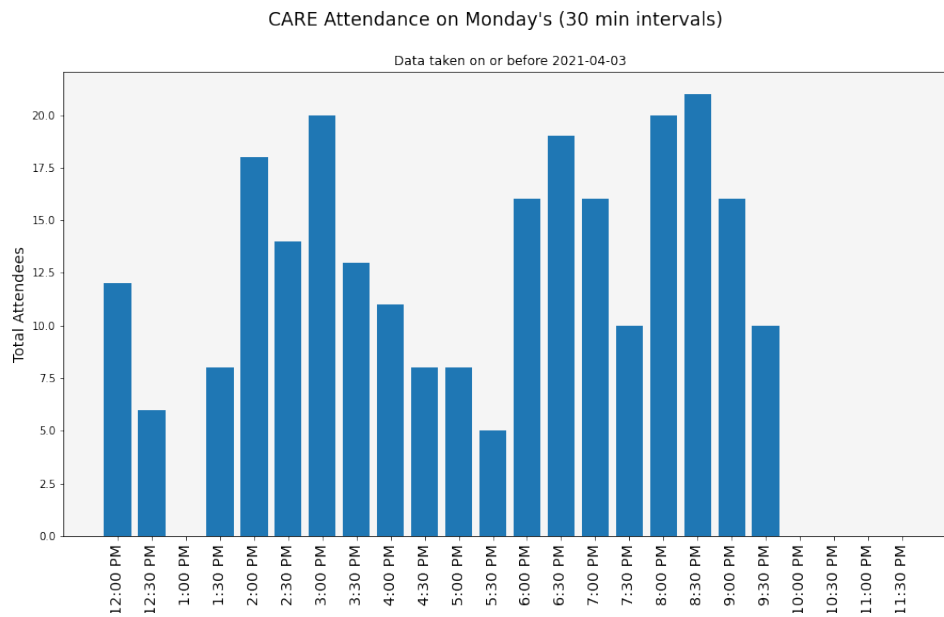


Figure 8: Traffic by Hour on Monday

4.3 Tuesday

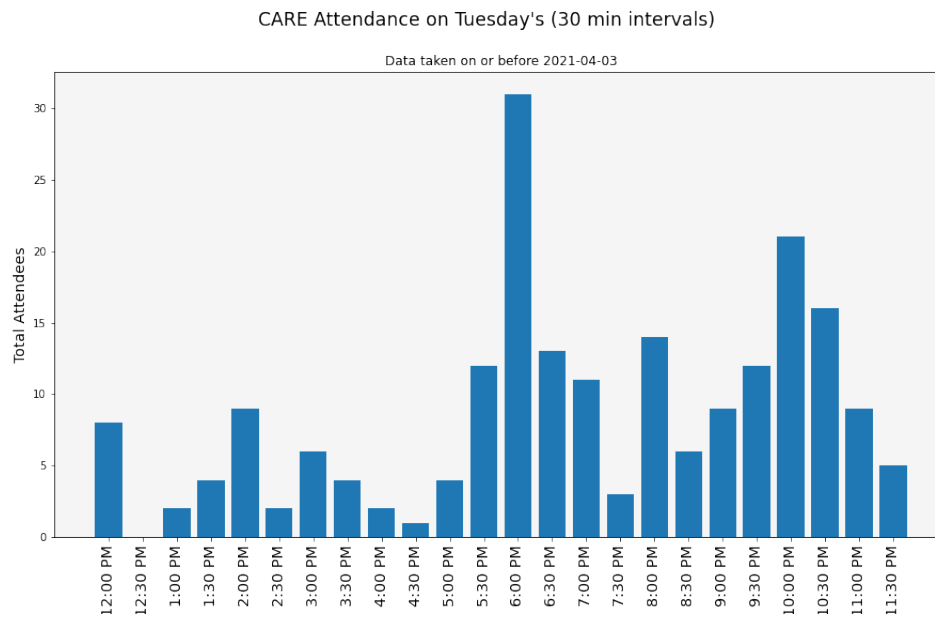


Figure 9: Traffic by Hour on Tuesday

4.4 Wednesday

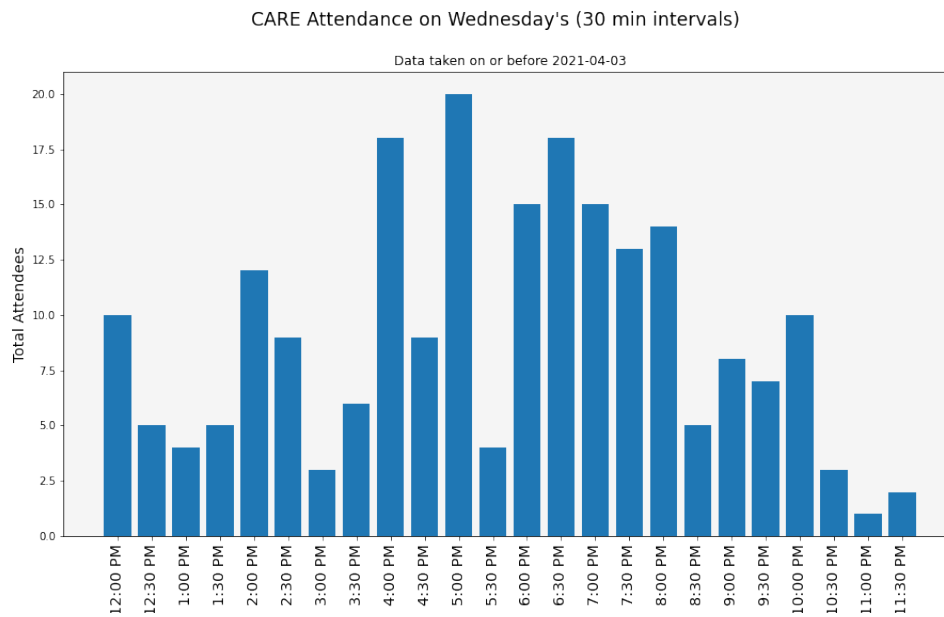


Figure 10: Traffic by Hour on Wednesday

4.5 Thursday

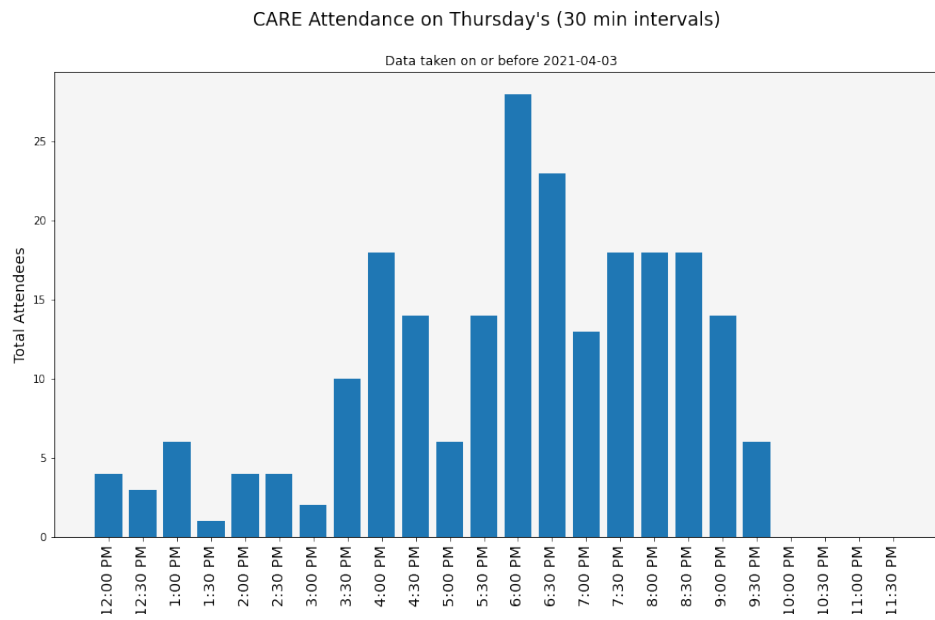


Figure 11: Traffic by Hour on Thursday

4.6 Friday

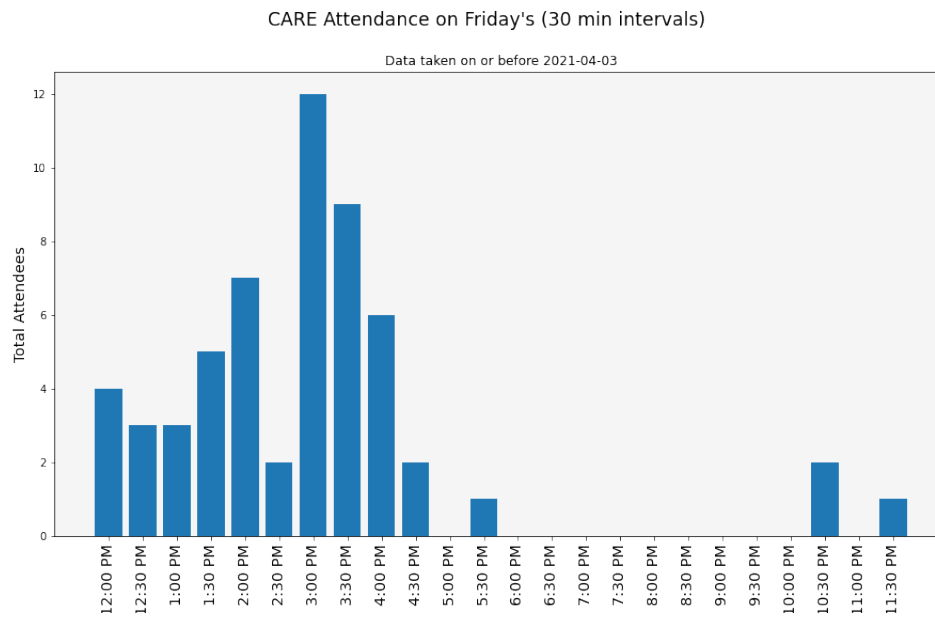


Figure 12: Traffic by Hour on Friday

4.7 Saturday

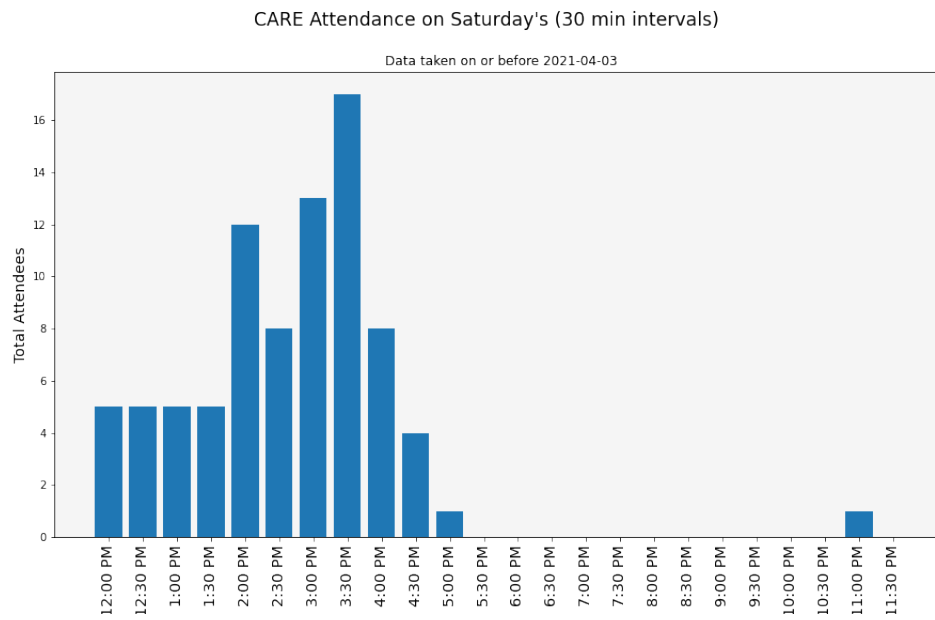


Figure 13: Traffic by Hour on Saturday

5 Exam Review Sessions

CARE hosts a number of exam review sessions for introductory courses. For each exam in these courses, we host one or two review sessions for students. In total there were 244 students at exam review sessions with the following breakdown by course (it should be noted that we do not mean 244 *unique* students, there may be some overlap between the courses).

Course	<i>Questions</i>	<i>Sessions</i>	<i>Average Attendance per Session</i>
Phys 214	81	5	16.2
Phys 211	58	4	14.5
Phys 212	42	5	8.4
Math 231	21	4	5.25
Math 285	20	4	5
Math 220	13	4	3.25
Math 241	9	2	4.5

Table 5: Breakdown of exam review sessions by course

5.1 Math 220

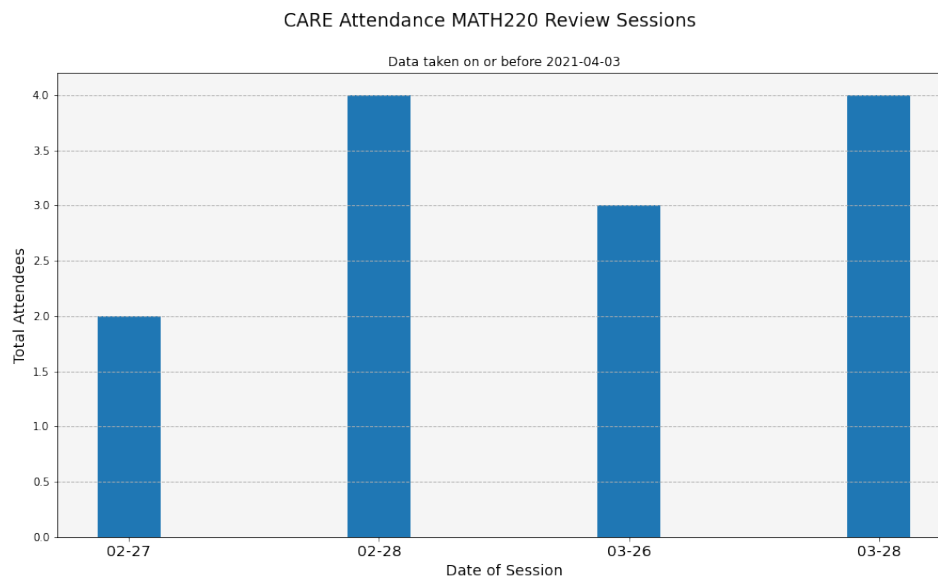


Figure 14: Traffic Math 220 Review Session

5.2 Math 231

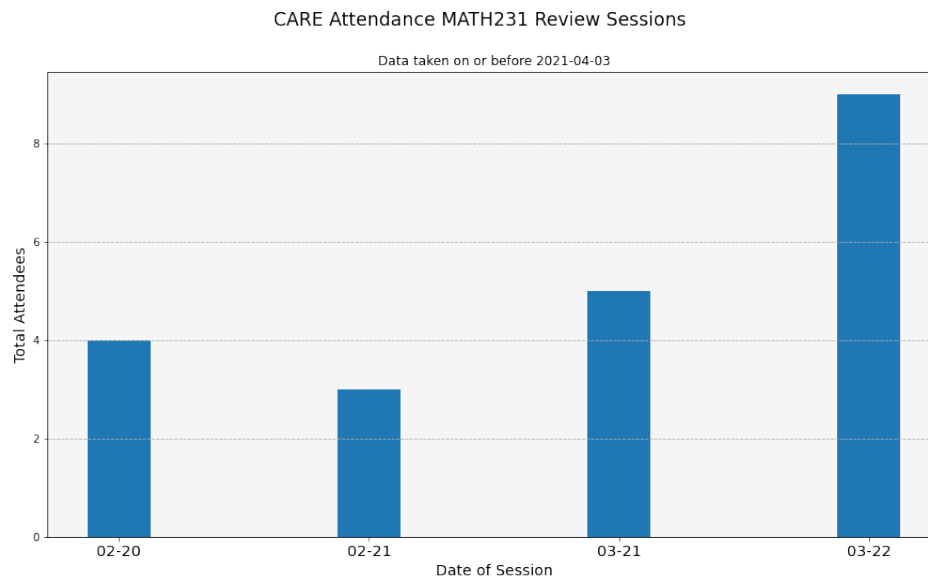


Figure 15: Traffic Math 231 Review Session

5.3 Math 241

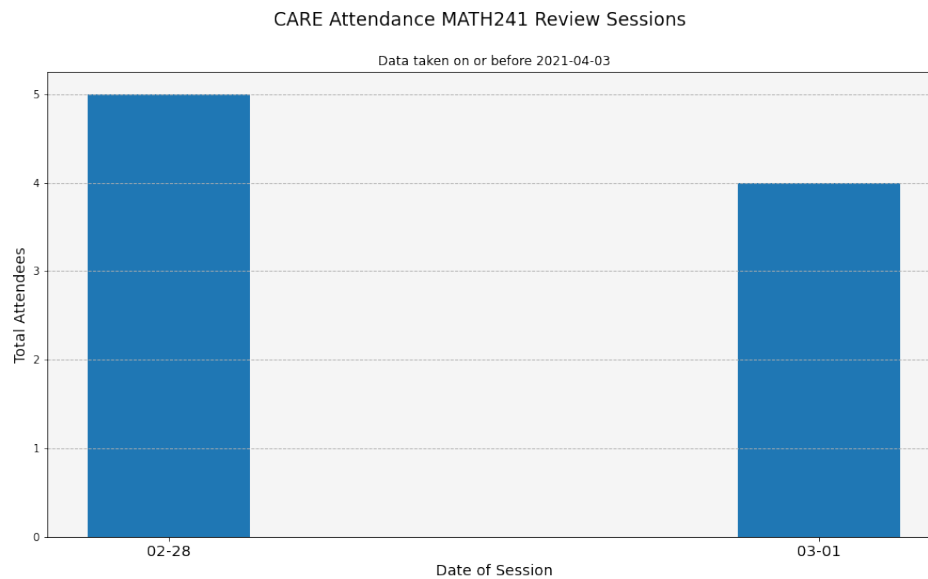


Figure 16: Traffic Math 241 Review Session

5.4 Math 285

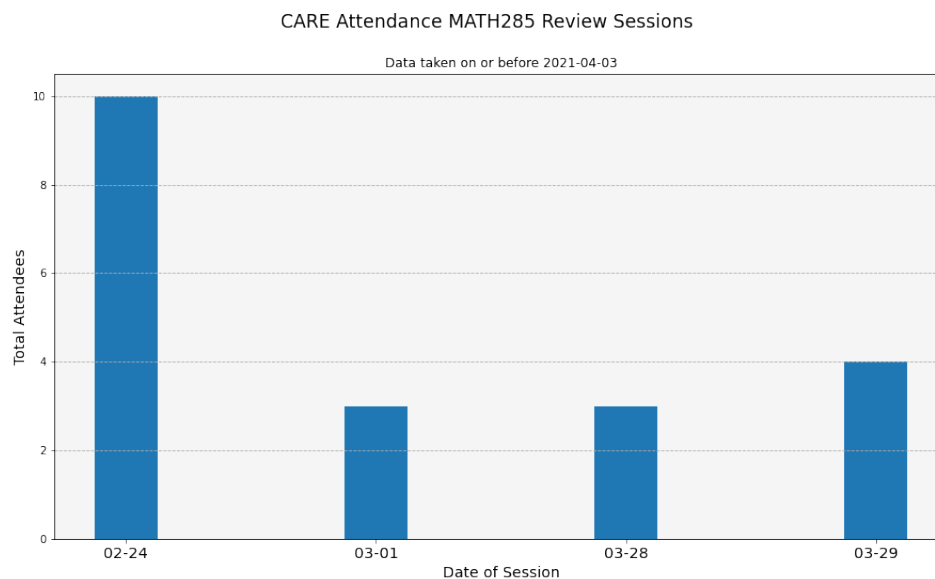


Figure 17: Traffic Math 285 Review Session

5.5 Phys 211

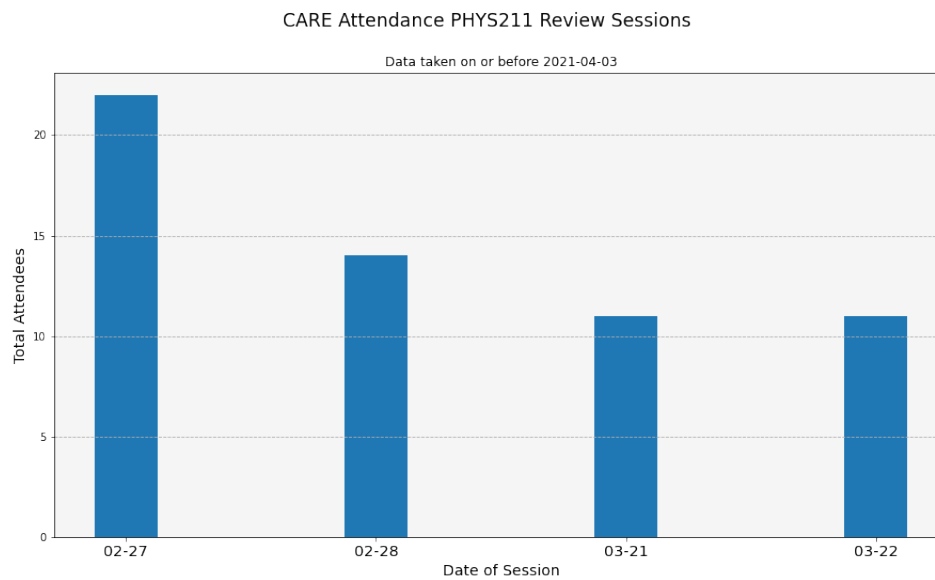


Figure 18: Traffic PHYS211 Review Session

5.6 Phys 212

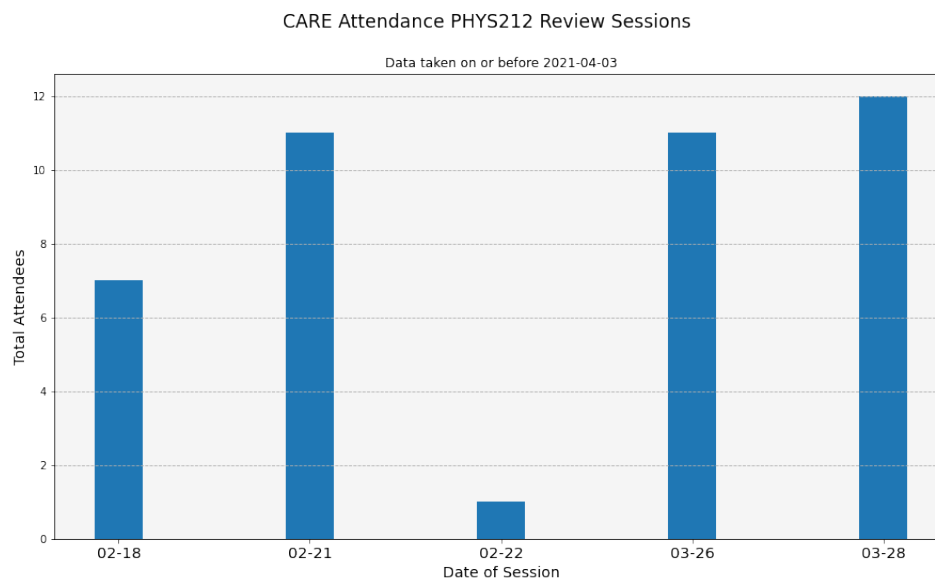


Figure 19: Traffic PHYS212 Review Session

5.7 Phys 214

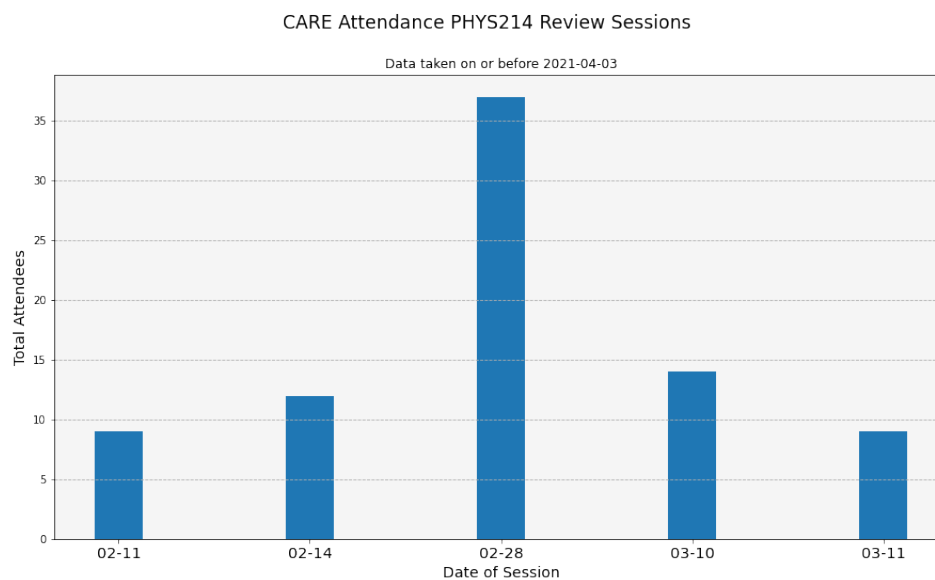


Figure 20: Traffic PHYS214 Review Session