# Virginia Tech
# Summer I 2021 VT Student Perceptions of Teaching (SPOT)

**Course:**    STAT_4714_64061_202106: Prob & Stat for EE-STAT_4714_64061_202106
**Instructor:**    Wei Liu *
**Response Rate:**    35/40 (87.50 %)

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**1 - Please indicate the extent to which you agree or disagree with each of the following statements:**

**1A - The instructor was well prepared.**

**Wei Liu**

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 0 | 0.00% | | |
| Somewhat agree | (4) | 2 | 5.71% | | |
| Agree | (5) | 15 | 42.86% | | |
| Strongly agree | (6) | 18 | 51.43% | | 5.46 (Question) / 5.13 (College) / 5.36 (Department) |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.46 | 0.61 | 6.00 | 933 | 5.13 | 1.14 | 5.00 | 80 | 5.36 | 0.86 | 6.00 |

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**1 - Please indicate the extent to which you agree or disagree with each of the following statements:**

**1B - The instructor presented the subject matter clearly.**

**Wei Liu**

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 0 | 0.00% | | |
| Somewhat agree | (4) | 5 | 14.29% | | |
| Agree | (5) | 14 | 40.00% | | |
| Strongly agree | (6) | 16 | 45.71% | | 5.31 (Question) / 4.96 (College) / 5.20 (Department) |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.31 | 0.72 | 5.00 | 932 | 4.96 | 1.25 | 5.00 | 79 | 5.20 | 0.95 | 5.00 |

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**1 - Please indicate the extent to which you agree or disagree with each of the following statements:**

**1C - The instructor provided feedback intended to improve my course performance.**

**Wei Liu**

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 1 | 2.86% | | |
| Somewhat agree | (4) | 4 | 11.43% | | |
| Agree | (5) | 10 | 28.57% | | |
| Strongly agree | (6) | 20 | 57.14% | | 5.40 (Question) / 4.93 (College) / 5.33 (Department) |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.40 | 0.81 | 6.00 | 926 | 4.93 | 1.33 | 5.00 | 78 | 5.33 | 0.95 | 6.00 |

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## Summer I 2021 VT Student Perceptions of Teaching (SPOT)

**Course:**  STAT_4714_64061_202106: Prob & Stat for EE-STAT_4714_64061_202106

**Instructor:**  Wei Liu *

**Response Rate:**  35/40 (87.50 %)

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**1 - Please indicate the extent to which you agree or disagree with each of the following statements:**

**1D - The instructor fostered an atmosphere of mutual respect.**

**Wei Liu**

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 0 | 0.00% | | |
| Somewhat agree | (4) | 2 | 5.71% | | |
| Agree | (5) | 10 | 28.57% | | |
| Strongly agree | (6) | 23 | 65.71% | | 5.60 / 5.29 / 5.53 |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.60 | 0.60 | 6.00 | 922 | 5.29 | 1.09 | 6.00 | 78 | 5.53 | 0.80 | 6.00 |

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**1 - Please indicate the extent to which you agree or disagree with each of the following statements:**

**1E - Overall, the instructor's teaching was effective.**

**Wei Liu**

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 0 | 0.00% | | |
| Somewhat agree | (4) | 3 | 8.57% | | |
| Agree | (5) | 16 | 45.71% | | |
| Strongly agree | (6) | 16 | 45.71% | | 5.37 / 4.95 / 5.33 |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.37 | 0.65 | 5.00 | 917 | 4.95 | 1.31 | 5.00 | 79 | 5.33 | 0.87 | 6.00 |

| | |
|---|---|
| **Course:** | STAT_4714_64061_202106: Prob & Stat for EE-STAT_4714_64061_202106 |
| **Instructor:** | Wei Liu * |
| **Response Rate:** | 35/40 (87.50 %) |

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| **2 - 2A - What did the instructor do that most helped in your learning?** |
|---|

| **Wei Liu** |
|---|

| **Response Rate** | 25/40 (62.5%) |
|---|---|

• Truly cared about my success and gave me plenty of opportunities to show my knowledge

• Instructor Wei had office hours every single day, and those who took advantage of the office hours would have definitely found that it was helpful in understanding the homeworks, matlabs, and lectures. I did not like how it was asynchronous but this had nothing to do with our instructor. She was able to teach the matlab step by step showing us how it works and also helping us understand the homeworks by referring to the lecture notes.

• Great teacher, lectures were well planned and she was very through in her explanations

• Posting all resources in a timely fashion on Youtube as well as in the files available on Canvas.

• Clear PowerPoints

• Written notes to follow along with the videos

• Prof Wei explained the concepts of the course very clearly which made it easier to attempt quizzes and homework every week.

• Provided extremely detailed lecture notes that assisted me in learning when I did not have time / was not able to watch the lecture videos.

• Gave us a lot of resources and gave really good examples

• The professor was very communicative with her students, offering all helps needed. She was able to take the feedback of her students and make adjustments for student's improvements.

• I enjoyed having the video lectures and the notes were very easy to follow and understand.

• Provided solutions to problems with details after the homework was due in order to study effectively.

• nice lecture videos and explanations

• The instructor had the filled in notes ready for each lesson which made learning the subject easy.

• I really appreciated how she gave us notes beforehand that went with the lectures so that we could follow along with her. I also liked how she led us to corrections on some of the homeworks that we were really struggling with, because it allowed us to correct our mistake by fixing it and then giving an explanation about why our newer answer is the correct one.

• Show examples and give example matlab code

• The lecture notes were very detailed and useful as a reference and to learn from. However, there were a decent amount of typos on them, although this was often addressed in lectures, so it wasn't a huge issue.

• The instructor was very eager to provide feedback through the course.

• I really appreciated how the instructor maintained learning as the core outcome of the course. Allowing multiple attempts on quizzes, test corrections, etc. are some strategies that she used to relax the pressure when it came to grades for the course. I greatly appreciated how this allowed me to focus on learning and understanding the course content as my primary objective, rather than worrying about grades. The instructor was uniquely able to create a pleasant and relaxed class experience that allowed me to prioritize my learning and reduce my stress.

• The pdf notes were very helpful to read through.

• Prepared notes and provided example code in Matlab to help better explain the subject matter.

• Ms. Liu cared a lot about students and gave them inciteful lectures and explanations for students to learn from mistakes on assignments

• Instructor was very active in answering questions. Lectures and lecture slides were easy to follow and informative.

• Professor Liu's lectures and pace of the course was very helpful to my learning. The homework assignment were very interesting and engaging and I learned also through the weekly quizzes. I enjoyed her teaching style and how she interacted with us.

• Incorporating Matlab into the course/assignments increased both my interest and understanding of the topics.
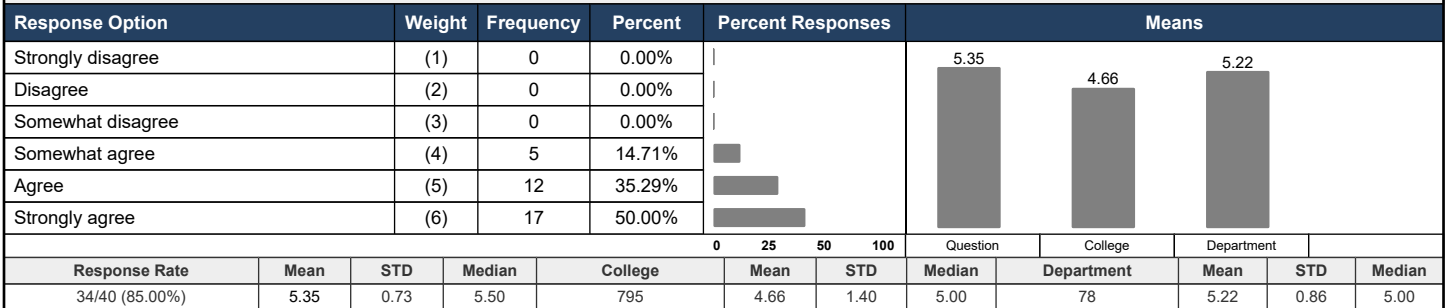
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| **3 - Please indicate the extent to which you agree or disagree with each of the following statements:** |
|---|

| **3A - I have a deeper understanding of the subject matter as a result of this course.** |
|---|

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | 5.51 |
| Somewhat disagree | (3) | 0 | 0.00% | | 4.99 |
| Somewhat agree | (4) | 2 | 5.71% | | 5.41 |
| Agree | (5) | 13 | 37.14% | | |
| Strongly agree | (6) | 20 | 57.14% | | |

| | | | | 0 25 50 100 | Question | College | Department |
|---|---|---|---|---|---|---|---|

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.51 | 0.61 | 6.00 | 796 | 4.99 | 1.23 | 5.00 | 79 | 5.41 | 0.78 | 6.00 |

**Course:** STAT_4714_64061_202106: Prob & Stat for EE-STAT_4714_64061_202106

**Instructor:** Wei Liu *

**Response Rate:** 35/40 (87.50 %)

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**3 - Please indicate the extent to which you agree or disagree with each of the following statements:**

**3B - My interest in the subject matter was stimulated by this course.**

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | 5.35 (Question) |
| Somewhat disagree | (3) | 0 | 0.00% | | 4.66 (College) |
| Somewhat agree | (4) | 5 | 14.71% | | 5.22 (Department) |
| Agree | (5) | 12 | 35.29% | | |
| Strongly agree | (6) | 17 | 50.00% | | |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34/40 (85.00%) | 5.35 | 0.73 | 5.50 | 795 | 4.66 | 1.40 | 5.00 | 78 | 5.22 | 0.86 | 5.00 |

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**4 - 4A - What could you have done to be a better learner?**

| Response Rate | 23/40 (57.5%) |
|---|---|

• Put more time into studying and retaining the information, but now I know what I can use to reference

• I think I did my best in attending all the office hours. I saw myself getting behind on the lecture videos because of external jobs and such, so if I maybe watched the videos on time where this situation could not have happened, that would have been beneficial. I was able to fully be caught up in the beginning, and I saw myself loosing interest in watching the videos and lecture notes near the end.

• Nothing

• I could have watched the lecture videos earlier rather than watch them while doing the HW.

• Since the course was asynchronous, I had difficulties with making sure I was watching videos and keeping up with notes. I would sometimes complete 2-3 days worth of notes in one day. To be a better learner, I should have done the notes the day they were assigned.

• I absolutely could have devoted more time to this course and became more active in my own research into probability and statistics.

• Go over my notes and compare them with the notes given to us

• I believe going over the course materials more and be able to contribute more time would improve my performance, but there was a lack of time overall throughout the semester.

• Good.

• I could've gone over everything for exams as a study guide.

• Studied more.

• reread notes better

• Completed the homework in a more consistent manner.

• I could have watched the lectures in a timely manner instead of trying to cram them in altogether.

• Check canvas everyday and watch the lectures on time

• I could have spread out my studying rather than doing it all at once.

• I have been very busy over the summer, and I have been completing the homeworks, etc. at night. However, sometimes I temporarily skipped material irrelevant to the homework and revised it over the weekend when I had the time. I don't typically do this, but with my circumstances I had to.

• I could have consulted the course textbook to deepen my learning, but the knowledge from the lectures helped me gain sufficient understanding on its own.

• I could have done more prep for the exams.

• Spent time reading the book and not just watching lectures.

• ask more questions when I was stuck.

• I could started the homework earlier because I stressed myself out when I had to finish the homework in 3 hours.

• I missed a few homework assignments, I shouldn't have done that.

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**Instructor:** Wei Liu *
**Response Rate:** 35/40 (87.50 %)

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| 5 - 5A - Please add any additional comments regarding the course and/or instructor here: |
|---|
| **Wei Liu** |

| Response Rate | 16/40 (40%) |
|---|---|

• She is very nice, and honestly very helpful. Even though this class was HARD and we had homeworks due every 3 days, Wei had office hours to help us learn better and to not be stuck on the homeworks. For not being a professor, I think she did a great job. People who probably were struggling definitely did not attend the office hours because that CARRIEDDD me.

• Mostly clear and concise lecturing. Perhaps some improvements that could be made are sometimes more succinct or clear instructions for some of the homework programming aspects and/or have slightly better video quality for the lecture videos.

• Interesting class! The amount of help you gave (like extra credit and second attempts) helped a lot in reducing the stress of the class.

• This course really peaked my interest in the field of statistics, I thought this was a bunch of mumbo jumbo however the topics are really freaking cool.

• While there were couple of components of the course material that are ordered more detailedly for reviews and studies, I couldn't ask for a better instructor in regards to her effort in taking student's feedbacks as well as to assist them in taking this difficult course into something that's more 'manageable'.

• Good.

• Great Professor! very nice and helpful as well!

• None

• N/A

• N/A

• The instructor is very nice and accomodating. She is also very helpful with her feedback. The only problem with the course is that it didn't teach you how to think about statistics, but rather what to think about statistics. I understand the course must be simplified and streamlined for engineering applications, but I would have liked to see more of an in-depth discussion surrounding the statistical theory and literature surrounding the methods. I would have also liked to see more about multivariate statistics. I hope to take more statistics courses in the future.

• This has been a very well done class. Even though I have some previous statistical knowledge, I found this course really helped to solidify my understanding as well as introduce some more advanced concepts that I had not seen before. If I had been completely new to statistics, I think I would have struggled more. Overall, the lecture format was good (and I really appreciate the use of example problems), however there were a few times when some concepts were used/introduced either without or before explaining them -- I think one example of this was mentioning p-value a lot before explaining what it meant. I think watching out for this could make some of the lectures flow a bit more smoothly. Otherwise, I thought the course content/structure, etc. was well done. I liked how the computational problems required us to use software, as it felt like more realistic experience. As previously stated, it really felt to me that learning was strongly the focus of the class, and that's not something that I can say about all the other courses I take. I greatly enjoyed this emphasis on learning and applying knowledge, rather than just being stressed/overwhelmed by assignments. The instructor was extremely kind and always welcoming of feedback to improve the course. It was evident that she put in a lot of time and effort into this course, and you could tell that she genuinely wanted the students to succeed. I only hope that future students do not take advantage of the instructor's kindness because it really does make for an excellent learning environment. I couldn't be happier with how this course has been.

• I attempted this course before and struggled to comprehend the lectures. Liu explained the subject matter very clearly and made it very easy to understand!

• Ms. Liu was one of the best instructors I have had in a while. She seemed to really care about students more than any other professor I've met and was well prepared with material and knowledge. It was refreshing to have a professor that can actually convey the information of the course as most other professor lack this trait in my experience.

• Very good instructor, actively tries to help students learn the material.

• I enjoyed working with Professor Liu this summer semester, I enjoyed the lectures and the fact that I believe that she cares about all her students. She is obviously knowledgeable in the subject and I appreciate working with her.

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| 6 - 6A - How would you rate the physical environment in which you took this class based upon your ability to see, hear, concentrate, and participate? |

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Very Bad | (1) | 1 | 2.94% | | |
| Bad | (2) | 1 | 2.94% | | |
| Poor | (3) | 0 | 0.00% | | 4.94 / 4.98 / 5.12 |
| Fair | (4) | 7 | 20.59% | | |
| Good | (5) | 13 | 38.24% | | |
| Very Good | (6) | 12 | 35.29% | | |

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34/40 (85.00%) | 4.94 | 1.15 | 5.00 | 778 | 4.98 | 0.98 | 5.00 | 76 | 5.12 | 0.99 | 5.00 |

**Course:** STAT_4714_64061_202106: Prob & Stat for EE-STAT_4714_64061_202106
**Instructor:** Wei Liu *
**Response Rate:** 35/40 (87.50 %)

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### 7 - 7A - Please add any comments about the physical environment here:

| Response Rate | 17/40 (42.5%) |
|---|---|

- Working 9 - 6 M-F while taking two other classes in a new city with no money, so very stressed the entire time

- Hear was 10/10 - it was a VT video so you can hear. it was good. Concentrate was 0/10 - I had to rewatch things multiple times or ask questions in office hours because i honestly cannot concentrate with asynchronous. Its just watching a youtube video for credit. Idk,,,, I never am taking an asynchronous class again. This has nothing to do with Wei or the professor or the class. Just me personally. I cannot do virtual anymore and definitely not ASYNCHRONOUS i hate it. Participate was 0/10..well since its async you cant ask any questions while theyre going over the notes. Office hours 10/10

- Online classes are acceptable for certain types of classes of which I believe this type of class is well suited to.

- Course was online and asynchronous so there was no physical environment.

- I was taking this course half-way across the globe, hence time differences forced me to sleep 3-4 hours a day but other than that it wasn't as bad. The professor had different times within the week's office hours for student with my situation to participate earlier.

- Good.

- None

- N/A

- N/A

- sometimes the section of the notes being read was not shown in the frame at the same time (it was cut off at the top/bottom of the screen)

- The resolution of the lectures was low.

- The online format is alright. With an in-person class, there may have been more discussion surrounding the statistical methods covered in the course.

- The virtual environment was good. Asynchronous lectures were very convenient for this summer class since I was working during the day.

- I took this class online in my home.

- N/A

- N/A

- The lectures uploaded to youtube are much easier to navigate compared to the zoom videos.

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### 8 - I improved my ability to think independently about the course material.

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 1 | 2.94% | | |
| Somewhat agree | (4) | 2 | 5.88% | | |
| Agree | (5) | 19 | 55.88% | | |
| Strongly agree | (6) | 12 | 35.29% | | |

Means: Question 5.24, College 5.04, Department 5.26

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34/40 (85.00%) | 5.24 | 0.70 | 5.00 | 789 | 5.04 | 1.04 | 5.00 | 78 | 5.26 | 0.69 | 5.00 |

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### 9 - I learned to identify problems and explore different solutions.

| Response Option | Weight | Frequency | Percent | Percent Responses | Means |
|---|---|---|---|---|---|
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 1 | 2.86% | | |
| Somewhat agree | (4) | 2 | 5.71% | | |
| Agree | (5) | 19 | 54.29% | | |
| Strongly agree | (6) | 13 | 37.14% | | |

Means: Question 5.26, College 5.01, Department 5.29

| Response Rate | Mean | STD | Median | College | Mean | STD | Median | Department | Mean | STD | Median |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.26 | 0.70 | 5.00 | 790 | 5.01 | 1.04 | 5.00 | 78 | 5.29 | 0.69 | 5.00 |

**Course:** STAT_4714_64061_202106: Prob & Stat for EE-STAT_4714_64061_202106
**Instructor:** Wei Liu *
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| 10 - The instructor used a scholarly approach in presenting content (referencing theory, research, and debates in the field). | | | | | |
|---|---|---|---|---|---|
| **Wei Liu** | | | | | |
| **Response Option** | **Weight** | **Frequency** | **Percent** | **Percent Responses** | **Means** |
| Strongly disagree | (1) | 0 | 0.00% | | |
| Disagree | (2) | 0 | 0.00% | | |
| Somewhat disagree | (3) | 1 | 2.86% | | |
| Somewhat agree | (4) | 3 | 8.57% | | |
| Agree | (5) | 13 | 37.14% | | |
| Strongly agree | (6) | 18 | 51.43% | | |



| **Response Rate** | **Mean** | **STD** | **Median** | **College** | **Mean** | **STD** | **Median** | **Department** | **Mean** | **STD** | **Median** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35/40 (87.50%) | 5.37 | 0.77 | 6.00 | 920 | 5.05 | 1.09 | 5.00 | 79 | 5.32 | 0.84 | 5.00 |