Student Comments on Teaching

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This document is a compilation of all the student comments that I have received for the classes which I have been a TA (teaching assistant) or instructor for. The description of the class and topics covered is shown in the sidenotes.

Undergraduate

These comments are made available through the Caltech students' review service after completing the class. The scores, on a rubric of 1 - 5, for **Assistance** (helping students with content via office hours or otherwise) and **Teaching** (teaching students the content directly) are also shown.

***Fall 2023**: Ma 1a - Calculus of One Variable* [1]

[1] This class of 224 students was an introduction to real analysis, covering the formal definitions of real numbers, limits of sequences and functions, derivatives, integrals, series expansions, and complex numbers.

I was a teaching assistant in charge of hosting office hours to around $\sim$ 25 students, as well as hosting reviews of the midterm and final exams.

Assistance: 5.00/5.00 by 9 students (Dept. average of 4.73)
Teaching: 4.89/5.00 by 9 students (Dept. average of 4.75)

- Ritvik has been a helpful and reliable TA.
- I found the review sessions and office hours really really helpful for the sets and exams.
- Great OH.
- Ritvik's final reviews are really good and worth taking a look at.
- Works out problems comprehensively. Has a solid understanding of the material and shares it with students. Makes the class more approachable and his review sessions for midterms/finals are extremely helpful. One thing they could improve on is writing bigger on the chalk boards. They are a fantastic TA though.

***Winter 2024**: Ma 1b - Analytical Linear Algebra* [2]

[2] This class of 127 students was an introduction to linear algebra, covering vector spaces, bases, matrices, systems of equations, inner products and norms, spectral theory, and diagonalization.

I was a teaching assistant in charge of teaching a weekly recitation section (for which I wrote LaTeX notes) and hosting office hours to around $\sim$ 30 students, as well as hosting reviews of the midterm and final exams.

Assistance: 4.87/5.00 by 21 students (Dept. average of 4.80)
Teaching: 4.93/5.00 by 21 students (Dept. average of 4.84)

- Ritvik's notes are great.
- Ritvik was a great TA. He was always prepared, frequently took questions, and gave practice questions that were explanatory.
- Ritvik was a great TA, very knowledgeable. Although recitations were sometimes too challenging, they were interesting!
- Ritvik's office hours and midterm/final review session were really helpful! His notes also really helped summarize all the information in class into a more concise and understandable format.
- Great TA overall!
- Great final review session; office hours are always extremely helpful and productive; recitations are very thorough and helpful; his notes for the course are also very helpful and clear.
- Very clear explanations but sometimes the writing on the board was a bit small. Overall very good. I understand the notes were volunteer, but some of the pages were missing.
- Attended recitations, well prepared with a couple examples to illustrate each concept. Well organised in his teaching and presentation.
- Ritvik was very skilled in conveying the course material. I saw many students reach an understanding in his recitations.
- Ritvik's office hours and recitation slides were invaluable in this class. He explained topics well and, while it sometimes felt like he over-complicated things, his discussions usually made sense. On the whole, I think it might have been more helpful if he was more concise and to-the-point in his explanations and slides. Nevertheless, his help was very useful.
- Ritvik was extremely helpful. His recitation sections were very informative and he taught them well. Also, the recitation notes that he posted were a key resource in this class.
- For me, Professor Graber was hard to understand and I relied mostly on the textbook and Ritvik's recitation notes.

Spring 2024: ACM 11 - Introduction to Computational Science and Engineering [3]

[3] This class of 84 students was an introduction to numerical methods, such as ODE and PDE solvers, numerical linear algebra, root-finders, optimization, quadrature methods, Monte Carlo simulations, and inverse problems.

I was a teaching assistant in charge of hosting optional recitation sections (i.e. primer on `MATLAB`, further exploration of topics in class) and hosting office hours to around $\sim$ 30 students, as well as helping the instructor re-design the problem sets by adding conceptual questions.

Assistance: 4.98/5.00 by 26 students (Dept. average of 4.75)
Teaching: 5.00/5.00 by 26 students (Dept. average of 4.73)

- Ritvik was also a great TA and knew the subject matter well. Every time I asked a question, he was able to answer in a concise manner, and was also able to inform me on where some of the formulas and algorithms originate from.
- Always available for help!
- Ritvik is an incredible TA! He has really great knowledge of the subject matter, and he presents topics with great perspective, going above and beyond to teach me things that are beyond the content of the class, which I really appreciate it.
- Explanations during office hours were very helpful.
- Explained the material really well.
- He had quick responses and was always available in class.
- Gave good feedback on minute responses, went above and beyond to help out on the sets.
- Explained concepts clearly and efficiently and was patient in the learning process. Very effective instructor, also cannot speak highly enough of.
- Provides a lot of cool visualization tips and tricks and helps a lot with code optimization. Takes time to understand how you are approaching the problem and guides you based on what you have completed.

***Fall 2024**: ACM 116 - Introduction to Probability Models* [4]

[4] This class of 150 students was an introduction to stochastic processes, starting with basic probability theory, moment generating functions, random vectors and matrices, Gaussian vectors, Poisson processes, Brownian motion, and theory of general processes.

I was the **head** teaching assistant for the course, in charge of managing a team of 10 TAs and giving them grading assignments, hosting midterm and final reviews for the class, answering all questions on Piazza, typesetting the lecture notes, and hosting office hours to around ~ 30 students.

Assistance: 4.85/5.00 by 34 students (Dept. average of 4.85)
Teaching: 4.88/5.00 by 34 students (Dept. average of 4.90)

- Awesome head TA! He cares about every student's understanding of the course materials. He typically responds to Piazza posts/emails promptly and explains concepts in a way that builds intuition. The transcriptions of Prof. Zuev's lectures look taken out of a textbook, they were really useful, and the review sessions held were the best for preparing for were extremely helpful in solidifying one's understanding of the course material.
- Rapid response; organized the typed lecture notes.
- Most engaged TA I have ever had! Very helpful and on top of everything!
- Best TA of all time
- Ritvik was awsome! He gave reviews before the exam and knew the topics as well as Prof. Zuev.
- Ritvik was a great TA!
- Ritvik's review sessions on the lecture content were okay, but I felt that his practice problems were significantly harder than the actual exams, to the point where I felt unduly anxious about the exams relative to what the questions ended up being. I also felt that he went into too much mathematical detail on some of the problems (including concepts not really/only superficially covered in the class, which actually made it more difficult to synthesize the content and understand it at the level of this class before exams.
- He spent a lot of extra time typing up notes and writing really good review documents. Much appreciated!
- Ritvik was an AMAZING TA. He was very quick to respond to student questions on Piazza, and in office hours he was very helpful. He obviously put a lot of time and hard work into being TA, and the whole class was very appreciative. He was also very friendly in office hours which made him very approachable. He answered all questions very thoroughly.
- Absolutely great Head TA. Incredibly accommodating and always responds to questions incredibly fast with really detailed answers. I wish all head TAs were like him.

- Ritvik is a PHENOMENAL TA!! Seriously, no-one compares to how knowledgeable and responsive he is. He will make a great professor one day, no doubt about it!
- Ritvik is really good at explaining complicated concepts in a simple and easy to understand fashion. Really enjoyed learning from him!
- Might be the GOAT(A). Not even funny how much Ritvik put into this course, from typesetting notes to holding additional office hours.
- Ritvik was extremely helpful in office hours, making sure to emphasize conceptual understanding. His typed notes were awesome and super professional.
- Was super responsive over email and made extension requests really easy when I was struggling with content. Was also super great about providing assistance with Matlab difficulties through email.
- Ritvik was very dedicated to teaching this course, and we are all very grateful for it. It is clear he spent a lot of time making sure we had the resources we needed to learn the course content.
- Excellent. Ritvik was VERY responsive on Piazza (shockingly so) and showed immense dedication in his willingness to help make up office hours that other TAs may have had to miss, typing up several of the lecture notes, and leading comprehensive review sessions (as well as having good office hours himself). He showed a very strong understanding of the material. Ritvik sets the bar very high for TAs, especially if one stops and thinks about all the academic work he likely has on his own plate for himself. It would honestly be too much to expect any TA to meet the bar he sets (I know I certainly would struggle to do so), but it's all the more reason he deserves the highest praise as a TA. And of course he wasn't rude or condescending (just worth mentioning since if a TA was that, it'd negate a lot of the other stuff).
- He was always very responsive on piazza and held many extra OH.
- Excellent TA, can immediately tell he spent time to making notes and material ready for students.
- Ritvik would always help explain concepts very clearly! I love his teaching style, I learned soooo much from him.
- This year head TA Ritvik created typed versions of the notes for the second half of the course, as well as for the midterm and final reviews, which were extremely helpful for learning the material and doing well on the exams.

***Winter 2025**: ACM 154 - Inverse Problems & Data Assimilation* [5]

[5] This class of 15 students was a **graduate** level course on topics of inverse problems and data assimilation, such as variational and Bayesian inverse problems, optimization, Gaussian approximations, Monte Carlo Markov chain samplers, Kalman filters, 3DVAR/4DVAR, ensemble filters, and regularization.

I was the sole teaching assistant, in charge of grading the assignments, hosting office hours to around $\sim$ 5 students, and co-grading their final project presentations with the instructor.

Assistance: 5.00/5.00 by 2 students (Dept. average of 4.63)
Teaching: 5.00/5.00 by 2 students (Dept. average of 4.69)

No comments given.

***Spring 2025**: ACM 95b - Introductory Methods of Applied Mathematics for the Physical Sciences* [6]

[6] This class of 140 students was a undergraduate class extending on topics for applied methods for ODE/PDEs, such as Sturm-Liouville theory, Fourier series and transforms, Green's functions, solving BVPs, and qualitative/quantitative properties of solutions to the heat and wave equation.

I was the **head** teaching assistant for the course, in charge of managing a team of 9 TAs and giving them grading assignments, hosting midterm and final reviews for the class, designing the problem sets, answering all questions on Piazza, incorporating questions through the newly incorporated educational software `STACK`, and hosting office hours to around $\sim$ 30 students.

Assistance: 4.71/5.00 by 33 students (Dept. average of 4.66)
Teaching: 4.75/5.00 by 33 students (Dept. average of 4.55)

- Dedicated an insane amount of time to ensure all learning deliverables were met and set extra office hours with and without request which made the whole more manageable for a large number of students.
- Was great in explaining fundamental concepts of the course and tying everything together for homework/exams. However, his midterm review was not incredibly helpful for the actual midterm (which many struggled with).
- Ritvik is the GOAT.
- Very excellent teaching, clear, puts lot of effort into helping students.
- Ritvik's office hours were super helpful! He always guided us in the right direction for the sets and helped understand stuff conceptually.
- Midterm and final review slides were very helpful and very good resources in preparing for the exams. Office hours could have been structured a lot better. Ritvik's OH were probably the most visited ones and for the large number of people (40+

sometimes), it would have been significantly more efficient to help people all at once by asking which questions students need help with and writing out hints for those problems on the board. Sometimes individual students actually asked him to do this and he'd do it for only the question that it was specifically requested for and then move on with individual questions only. As a result it was often really hard to get any help in this OH. Esp since he'd frequently help with only one small detail and not give more direction.

- Ritvik is super helpful in his office hours and is a very on-top-of-it head TA!
- Amazing TA, really knows a lot about the subject, and more importantly, knows how to explain the content to students well. He knows the ins and outs of the subject and he really helped run the class amazingly well. The topics recitation was also very interesting and I was glad he held it. Piazza responses and responses to emails in general were very quick.
- I think he had a well structured final review and midterm review, which was helpful for identifying what parts to study and how to study. he had great slides for those. He was also quite accommodating extension policy wise. He is very vague at office hours and has a high attendance but doesn't necessarily go through problems on the board to make it efficient, making his office hours a bit redundant. I definitely think there were better ways to approach OH if you have 30+ people attending regularly.
- Ritvik is such a helpful and dedicated TA. It is very clear that he is very passionate about the material in this course. Even while being very busy as a head TA, he still manages to reply to Piazza posts very thoroughly and in detail, which I really appreciate. From my perspective, the course ran very smoothly overall and this is very much thanks to Ritvik
- I found that Ritvik's queue line was really helpful for me because it allowed me to ask as many questions as I needed.
- Ritvik did a great job keeping the class organized and was really responsive on Piazza.

***Fall 2025**: ACM 116 - Introduction to Probability Models*

I was a teaching assistant for the course, answering all questions on Piazza, typesetting the lecture notes, and hosting office hours to around $\sim$ 20 students.

Assistance: 5.00/5.00 by 6 students (Dept. average of 4.63)

Teaching: 5.00/5.00 by 6 students (Dept. average of 4.65)

- Great TA, super helpful OHs, makes sure that you understand the broader concept before applying it to questions on the PSet.
- Ritvik's was very helpful in explaining how probability concepts operate the way they operate and provided relevant applications of various questions.

***Fall 2025**: Probability Theory & Computational Mathematics* [7]

[7] This class of 20 students was a **graduate** level probability theory class, covering measure theory, probability spaces, random variables and expectation, moments, L^p spaces, orthogonality, independence, concentration inequalities, weak convergence, the Berry-Esseen theorem, conditional expectation, conditioning for Gaussian families, and martingales.

I am a teaching assistant, responsible for hosting office hours, answering questions on Piazza, and hosting exam review sessions.

Assistance: 4.54/5.00 by 7 students (Dept. average of 4.3)
Teaching: 4.72/5.00 by 7 students (Dept. average of 4.46)

- He is a very intelligent undergraduate student who helps with the homework sets. Looks at my work and verifies my proofs. Nice guy.
- Ritvik provided helpful guiding hints in office hours, giving clear ideas for what steps could be useful in completing a problem.
- Great. Very responsive and provides great feedback and answers questions very nicely on Piazza.

***Fall 2025**: Linear Analysis with Applications* [8]

[8] This class of 30 students was a **graduate** level linear analysis class, covering Banach and Hilbert spaces, Fourier analysis, Sobolev spaces, duality and weak convergence, Schauder bases, continuous and compact embedding, compact operators, Lax-Milgram, and spectral theory for operators.

I am a teaching assistant, responsible for hosting office hours, answering questions on Piazza, and hosting exam review sessions.

Assistance: 4.29/5.00 by 3 students (Dept. average of 4.3)
Teaching: 4.50/5.00 by 3 students (Dept. average of 4.46)

- Ritvik provided clear guidance on homework problems in office hours.

***Winter 2026**: High-Dimensional Probability* [9]

I will be the **instructor** on record for this student-led class, in charge of writing lecture notes, creating the problem sets, delivering the lectures, and hosting office hours for students.

No comments given due to class ongoing.

[9] This class of 30 students was a topics class in probability theory, covering variance bounds, Poincaré and log-Sobolev inequalities, random vector and matrix concentration, and transport concentration.

***Winter 2026**: ACM 154 - Inverse Problems & Data Assimilation* [10]

I was a teaching assistant, in charge of grading the assignments, hosting office hours to around $\sim$ 5 students, and co-grading their final project presentations with the instructor.

Assistance: ?/5.00 by 2 students (Dept. average of ?)
Teaching: ?/5.00 by 2 students (Dept. average of ?)

No comments given due to class ongoing.

[10] This class of 22 students was a **graduate** level course on topics of inverse problems and data assimilation, such as variational and Bayesian inverse problems, optimization, Gaussian approximations, Monte Carlo Markov chain samplers, Kalman filters, 3DVAR/4DVAR, ensemble filters, and regularization.
