

Juliette Bruce's Teaching Statement

As a graduate student at the University of Wisconsin - Madison, I served as a teaching assistant and course coordinator for Calculus I for multiple semesters, the instructor of record for math for early education majors, and the instructor of record for a course providing students from generally under-represented groups additional support during their first college math course. Additionally, for several semesters, I held a non-traditional teaching assistantship for my role as the organizer of the Madison Math Circle outreach program. My passion for promoting an interest in and excitement for math – especially for people from generally underrepresented groups – led me to take on teaching and outreach roles through the *Girls Math Night Out* and the *Wisconsin Directed Reading Program*.

My teaching has been recognized through both awards and student evaluations:

- In 2018, I was one of three graduate students recognized campus-wide with the Teaching Assistant Award for Exceptional Service.
- I received two TA awards from the math department, the TA Service Award (2018) and the Capstone Teaching Award (2019), the latter of which is awarded to just one student each year, for an exceptional record of teaching excellence and service.
- My student evaluations are generally quite high; for instance, in my most recent course, 100% of students agreed that I was an effective teacher.

As an instructor, I view my role is to be an active guide. I encourage my students to explore, engage with, and question the course material for themselves. This is not to say I set my students adrift with no guidance, but instead that I try to structure as much of the course around guided group work that gives students opportunities to develop and discuss their understanding and confusion with their fellow students. In addition to encouraging students to take an active role in learning, this format also helps students to learn to vocalize their thought processes and ideas.

Active learning presents challenges to me and my students, most notably, the challenge of managing student mistakes. In many ways, the most significant moments during the learning process are not necessarily the moments of success, but the moments of failure. It is at this moment that students can recognize errors and gaps in their understanding of a subject and can begin trying to correct them. It is also the moment that as an instructor I can understand what my students are finding difficult and nudge the conversation in such a way as to overcome these hurdles.

Making mistakes is hard, and most students, like most people, would prefer not to make mistakes. With this in mind, I think it is crucial to promote an inclusive environment where all students feel comfortable and safe participating. I have found such an environment is very helpful in encouraging students to be open about what they are confused by and where they are making mistakes. Creating an inclusive classroom environment requires active attention and work to maintain. However, it has been my experience that this work is well worth it.

My approach to creating an inclusive classroom environment has been influenced by the semester long course *Inclusive Practices in the College Classroom*, which I took through the *Delta Program for Integrating Research, Teaching and Learning*. For example, one activity I've implemented successfully asks students to brainstorm attributes from classes they found productive and from classes they found less-productive. After collecting a list of such attributes, we use this as a jumping-off point for forming community standards that we wish to shape our classroom environment. Examples of such community standards that my classes have often adopted include: "Respect everyone" and "Address the problem, not the person, when discussing mistakes". I have found this helps the students buy into the belief that the classroom is an inclusive space where it is safe to make mistakes.

During my time as a graduate student, I have found teaching to be extremely rewarding. Going forward, I am looking forward to new opportunities to grow and learn as a teacher. Further, I am excited to continue promoting inclusivity, diversity, and justice in the classroom.

Excerpted Student Comments

Fall 2014 – Math 221 (TA for 2 Discussion Sections)

- In response to the question, “How could the TA improve his/her teaching?”
 - “Our TA is perfect. She is great at teaching math problems and concepts.”
 - “She arrives on time and when we don’t have questions she has a plan for the whole hour, she has been very effective and helpful in her teaching.”
 - “I believe that my TA is doing a great job as is, and does not need to change anything.”
- In response to the question, “What do you like most about the TA’s teaching?”
 - “She gets the whole class to participate.”
 - “She is very clear and helpful, and she really cares about our learning.”
 - “Our TA is very encouraging and optimistic. She treats everyone fairly. She is great at solving math problems of varying difficulties.”
 - “Very friendly and willing to help; tries to create a comfortable atmosphere open to questions and discussion.”
 - “She is always there for us and is willing to help us in any shape, way, or form. Holds review sessions, most TA’s don’t.”
 - “She is willing to find extra time to help out.”
 - “She takes a very confusing lecture and makes it understandable. If it weren’t for discussion my grade would be far lower.”
 - “I like that my TA is always willing to help, and honestly wants us all to succeed, which is reflected in her teaching methods.”
- In response to the question, “Any further comments?”
 - “TA should be the professor.”
 - “Very good TA!”
 - “I think Juliette Bruce is a very good TA.”
 - “By far one of the best TA’s.”
 - “She is essentially the best math teacher I’ve ever had.”
- Misc. comments
 - “The TA in charge of discussion appears to really care, ...”
 - “If it weren’t for your discussion I would still be lost ...”
 - “Thank you for all that you have done. I have thoroughly enjoyed your discussion, you made math actually enjoyable at 8:50 in the morning. I also found your discussion very helpful compared to lecture. I appreciate it!”

Spring 2015 – Math 132 (Instructor for 1 Discussion Section)

- In response to the question, “What do you like most about the TA’s teaching?”
 - “Constantly open to changing teaching style based on what we need.”

- “Willingness to talk through confusion and answer questions.”
- “Wanted us to succeed – tried to make concepts connect to our lives.”
- “She is very clear spoken and is always willing to go above and beyond to meet or clarify mistakes or confusion.”
- Misc. comments
 - “I really appreciate your willingness to help and desire for us succeed – especially when it comes to showing the material differently, or trying a different method to the course concepts.”

Spring 2016/2017, Fall 2016/2017 – Madison Math Circle (TA Student Organizer)

- Each semester we collect comments from parents, since I have been an organizer these have included:
 - “You guys are doing great stuff! Keep up the wonderful work!”
 - “Great job. This is a fantastic service that you provide. And all your presenters are so enthusiastic. Thank you for sharing your love of mathematics with us all.”
 - “My daughter loves the Math Circle and we’re very grateful for this opportunity. It has been an amazing experience for her!”
 - “Thank you for holding this course. My children like to be challenged in math and this is a great opportunity for them to experience math outside the box. They especially like when there is hands on group activities.”
 - “[Student] struggles with Math, not her strong suit, so I very much appreciate this resource!”

Fall 2018 – Math 221/228 (TA/Instructor for 1 Discussion Section)

- In response to the question, “What do you like most about the instructor’s teaching?”
 - “Juliette made sure that I knew all the material and was comfortable with it. When I did have confusion she was really understanding and broke down problems step by step through asking me questions and having me solve through the work in ways I understood. She is always so positive, supportive, and enthusiastic in class and made me excited to learn every day. Additionally, she provided challenging material broken down in simpler ways so we were able to expand our problem solving skills of complex problems in interesting attainable ways.”
 - “She explains thoroughly step by step, which makes learning the material much easier to understand. Anytime I have any questions or am confused in any way, she makes the time to explain it and I’d be able to explain it in more than one way so that I can understand. She’s also super supportive and helpful and creates a really great environment in which I look forward to coming to Discussion because I know it’ll be productive and helpful for me.”
 - “She always has a simpler way to explain stuff - Respectful - She brings interesting topics to class - challenges us effectively”
 - “I really appreciate how she explains things very clearly and goes through problems step-by-step. I also feel that she does an amazing job of preparing us for what is going to be on exams and explains exactly how we should write our answers to be the most clear possible in our understanding. She really knows what she is talking about, and is able to effectively communicate that understanding to someone who may be confused on the material.”
 - “She is very effective and takes time to make sure that everyone understands the materials that are taught in lecture. It is very obvious that she cares about how we do and that we are comfortable asking questions.”

- “Juliette will clearly work through all the problems for us. She has a good sense of what material we understand and what we don’t understand. Additionally, she is very supportive and encouraging. Juliette will effectively use time and I never feel like coming to class is ever a waste.”
- In response to the question, ‘How could the instructor improve his/her teaching?’
 - “Hmmm, tough question. Can a non massless particle reach the speed of light? Not really. The same goes here, I don’t think there’s a better teaching style than this”
 - “I think she already does a fantastic job teaching this course and do not have any recommendations for improvements at this time.”
 - “Juliette is honestly the best math instructor I’ve ever had so I can’t think of many ways she could improve her teaching.”
- Misc. comments
 - “I’ve always struggle with math and I’ve had a lot of teachers that didn’t believe in me so because of this I’ve always dreaded math courses. But Juliette always showed she cared, was constantly encouraging, believed in our class, and taught the material really clearly. From her constant availability to help and great instructing, her class became one of my favorites and I am more successful in a math course than I’ve ever been before.”
 - “I would highly recommend this instructor to anyone. She is incredibly good at explaining challenging concepts and is also a very kind and caring individual.”
 - “Juliette is an amazing TA and she has really made me interested in calculus.”
 - “She’s one of if not the best math teacher I’ve had and I strongly recommend anyone to take a class with her.”
 - “I went to the review today and I just wanted to let you know that everyone around me kept commenting about how good of a teacher you are. The people behind me said many times that they wished that you were our professor instead of [the professor]. I just wanted to let know that everyone was saying nice things about you and I am really so blessed to have had you for a TA :) ”
 - “I am sending this email to let you know that I appreciate all the support you have given us this semester. It has been a true pleasure being in your class this semester. And even though, I did not expect to learn much this semester, you proved me wrong so thank you. ”