University of New Mexico
2023 Fall Courses

Course: CS442001: Intro to Parallel Processing

Instructor: Amanda Bienz *

Response Rate: 12/30 (40.00 %)

1 - Please rate the instructor's overall teaching effectiveness:

Amanda Bienz

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Highly Effective	(5)	10	83.33%		4.83
Effective	(4)	2	16.67%		
Unsure	(3)	0	0.00%		
Ineffective	(2)	0	0.00%		
Highly Ineffective	(1)	0	0.00%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
12/30 (40.00%)	4.83	0.39	5.00

2 - How comfortable do you feel approaching the instructor with questions or comments?

Amanda Bienz

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Very Comfortable	(5)	12	100.00%		5.00
Somewhat Comfortable	(4)	0	0.00%		
Unsure	(3)	0	0.00%		
Somewhat Uncomfortable	(2)	0	0.00%		
Very Uncomfortable	(1)	0	0.00%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
12/30 (40.00%)	5.00	0.00	5.00

3 - What features of this course and of the instructor's teaching contributed most to your learning?

Amanda Bienz

Response Rate	10/30 (33.33%)

- Live coding, and posting of this. Posting of lectures and slides were helpful.
- Examples in class and powerpoints are very clear and well presented. Assignments and tests are directly related to the content taught, I never went into an assignment feeling like I was not given enough information to complete it. Professor Bienz is amazing and deserves a raise/promotion. Literally the best professor UNM has by far and the best teacher I've ever had. I will sign a petition to make Professor Bienz the department head over literally everyone else in the world. It is very clear that she is very passionate and knowledgeable about the content she teaches, and is also super friendly and helpful for each student. I don't typically ask too many questions in class, but the few that I did, she was super helpful and her answers were clearly stated.
- Writing and running code in class and showing graphs on the slides helped me feel more connected to the material and made it easier to learn.
- The code examples were great, and the format of the programming challenges were easy to verify and setup without feeling like the coding challenge was handed to you for free.
- You present the lectures very well. It's engaging, no awkward silences or just droning on. I like that the slides are posted with their subject titles so it is easy to navigate. I never dread attending your class.
- The professor frequently asks questions in between lectures to help clarify which really helps when you do know what to ask.
- I really appreciate Dr. Bienz's clear and thorough explanations of the complex concepts in the course. I felt comfortable and at ease to ask questions, voice comments, and actively participate in class. Her office hours are particularly good.
- She is so kind and approachable that it removed my typical anxiety to ask an abundance of questions. She was very available over discord, email, or office hours, which greatly improved my performance in the class.
- Dr. Bienz was always willing to take questions and explain topic in more detail or from a different angle to help students understand the material. The homework assignments/programming challenges were always relevant and helped reinforce what was covered in class. Dr. Bienz is a great teacher!
- Doing the in-class questions, the homeworks, and the final project were all helpful in aiding my learning. I found the lectures harder to follow, so the in-class questions were especially helpful in making sure I was actually following what was going on. Amanda is a great professor.

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4 - What specific suggestions do you have to improve the course and the instructor's teaching?

Amanda Bienz

Response Rate	10/30 (33.33%)

• A clear outline of the course with reading topics prior to lecture. Posting of class slides several days prior to lecture to allow for review.

• It would have been really nice to have the final presentations due finals week instead of the week before (having assignment 4 due the same day didn't really help with stress levels, no matter how long we had to do the assignment). But I totally understand why it had to happen (I think baby?)

• I would have liked if there were more homework sets. Homework is critical because this is where the material is applied and cemented in our minds. I also would have liked if more of the homeworks were focused on implementing non-trivial MPI-inspired algorithms in contrast to running benchmarking tests on different MPI algorithms.

• More suggested readings and outside materials (or at least some directions of what to self-study in parallel programming).

• I think the homework assignments need very specific instruction on how to compile and run the code when code is given. I would also incrementally add penalty if an assignment is late, encouraging students to get in in sooner than later if they miss the deadline.

• I think the slides and lectures could definitely be expanded to explain a lot more. I feel sometimes we didn't have enough from what we have on the slides to understand what we need to do on homework's. The homework's were a somewhat a far reach from what we actually had gone over in the class. It would help to definitely go over more material in the class so that we understand it better.

• A computer lab portion would be really helpful

• I enjoyed the class and cannot think of anything to improve it.

• I think it may be beneficial to go over "real" applications of MPI at some point in the semester. I think it could help students see how MPI is being used in real-world applications and get them thinking about how to use MPI in different contexts.

• The lectures were a little hard to follow, and it seemed like some of the people in the class (who had possibly more exposure to these topics before this class) were much more able to understand what was going on than some of us. Maybe having a little bit more of a background of the basics before jumping into everything. Regardless, I think having more in-class questions would be helpful.

5 - How helpful, knowledgeable, and professional was your TA?

Amanda Bienz

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Highly Effective	(1)	4	36.36%		
Effective	(2)	1	9.09%		
Unsure	(3)	0	0.00%		3.82
Ineffective	(4)	0	0.00%		
Highly Ineffective	(5)	0	0.00%		
N/A	(6)	6	54.55%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	3.82	2.52	6.00

6 - Were the problem sets/homework assigned helpful in learning the material in this course?

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Very Helpful	(1)	10	90.91%		
Somewhat Helpful	(2)	0	0.00%		
Unsure	(3)	0	0.00%		
Somewhat Unhelpful	(4)	1	9.09%		1.27
Very Unhelpful	(5)	0	0.00%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	1.27	0.90	1.00

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7 - How many times did you visit the instructor during his/her office hours?

Amanda Bienz

Response Option	Weight	Frequency	Percent	Percent Responses	Means
10 or more times	(1)	1	9.09%		
5-9 times	(2)	2	18.18%		
1-4 times	(3)	6	54.55%		2.82
Never	(4)	2	18.18%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	2.82	0.87	3.00

8 - How many times did you visit the TA during his/her office hours?

Amanda Bienz

Response Option	Weight	Frequency	Percent	Percent Responses	Means
10 or more times	(1)	0	0.00%		
5-9 times	(2)	1	9.09%		
1-4 times	(3)	2	18.18%		4.27
Never	(4)	1	9.09%		
N/A	(5)	7	63.64%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	4.27	1.10	5.00

9 - Were the quizzes, midterm, and final exam representative of the material presented in this course?

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Very Fair	(1)	9	81.82%		
Somewhat Fair	(2)	1	9.09%		
Unsure	(3)	1	9.09%		
Somewhat Unfair	(4)	0	0.00%		1.27
Very Unfair	(5)	0	0.00%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	1.27	0.65	1.00

10 - Have you learned new concepts/topics in the course?

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Yes, Many	(1)	10	90.91%		
Yes, Some	(2)	1	9.09%		
Yes, a Few	(3)	0	0.00%		1.09
No, none	(4)	0	0.00%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	1.09	0.30	1.00

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11 - If the course has prerequisites, did they adequately prepare you for the course?

Amanda Bienz

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Well prepared	(1)	4	36.36%		
Somewhat prepared	(2)	2	18.18%		2.45
Ill prepared	(3)	1	9.09%		
Not applicable	(4)	4	36.36%		
				0 25 50 100	Question

Response Rate	Mean	STD	Median
11/30 (36.67%)	2.45	1.37	2.00

12 - How well do you feel you learned to write MPI code? Would it have been helpful if you had written more MPI code throughout the semester?

Response Rate	12/30 (40%)

- I feel like this was an excellent introduction to MPI code and more simple coding experiences to reinforce concepts would be helpful.
- I feel like I have a good grasp of MPI in general. However implementing Canon's algo was really hard and I never ended up doing it correctly
- I learned a lot about writing MPI code, I don't think it would be helpful to have more assignments, but if I were able to work through the examples with the professor that would have helped a lot, but what happened this semester was more than sufficient, I believe.
- See my answer to "What specific suggestions do you have to improve the course and the instructor's teaching?"
- This class was well structured regarding projects and programming assignments
- I feel like the basics MPI were taught well and we got plenty of opportunities to code. The repo to pull with examples was the best place of learning for the homework assignments.
- I feel like I can adequately write MPI code although I did not, and would like to have, gain any experience with MPI I/O, communicators, or one sided communication. These topics probably could have helped with my algorithms for the project but I did not feel comfortable enough to use them. Perhaps these were covered in the programming challenges...
- Yes it would have helped to have written more throughout the semester in the class setting being guided at the same time.
- I feel much more confident with MPI code now after this course. I wrote lots of MPI code and even more would be better.A
- I think that I did learn it well, but I think I could have learned better if we did have more in class coding. I don't think more assignments are the answer unless they are just small assignments, since as it was, the class was well paced, and I do not think that more assignments could be tolerated without it being overwhelming and taking focus from other classes.
- I feel like I've learned the basics for MPI, in the sense that I don't know the entire protocol but have the tools now to understand basic MPI programs and to be able to learn new MPI concepts if I need to. I think we wrote a decent amount of MPI code throughout the semester, but an additional programming challenge or two wouldn't hurt.
- I feel like I could have used more exposure to MPI code. I do feel like I have learned how to write MPI code, but there are some basics that I feel like I don't understand well enough.

13 - Do you think this course would be better taught in a computer lab, where students step through MPI examples each day instead of watching the professor step through these examples? Feel free to add explanation as to why/why not.

Response Rate	12/30 (40%)

- I feel that maybe a weekly lab in place of one lecture to reinforce the current topics would be helpful.
- Yes, I find it hard to look at code on a presentation board and understand what's happening. Most lectures I didn't grasp the content until I went hope and coded it myself.
- If the lectures were still being done this would work well. I would not recommend this if it means the lectures aren't happening.
- I do not think this would be a good idea. Having students step through examples each day would slow down the pace of the class. Class is for learning new material and homework is for practicing and applying it. Additionally, having students step through examples themselves makes it more challenging for them to learn new concepts; I know I learn better having someone explain a concept to me than trying to learn it following a tutorial.
- the class would be better taught in computer lab
- Yes, I do think the course would be better from a computer lab with the ability to step through the MPI examples first hand. Changing variables and slightly modifying the examples was where I personally learned the most of MPI in this course.
- It could be useful to have this course in the lab but it can be more challenging to cover all the information in a lab setting without taking some sections out. I think I just would have preferred smaller, more frequent homework assignments so that we could have the opportunity to do a little bit of everything including something on debugging. I'm not a big fan of lab classes (b146 just makes me sleepy) but it might be worth a try.
- Yes I definitely think it would have helped more because from what we had in the slides definitely left you needing a lot more to do the homework's and assignments.
- Absolutely yes, this course would be better taught in a computer lap stepping through MPI examples. Getting feedback in real-time and being able to explore MPI with the professor and other students would be great.
- Yes I do because it helps me to learn by doing. My memory of concepts is longer when I have more hands on experience.
- I think a hybrid approach may be best. I think it's good to go over the background material with a lecture, but reinforce that material with homework or lab work. (see next answer)
- Yes, I do think this would be helpful. It's like the in-class questions, it's one thing to watch the professor do something, but it's another thing entirely to do it yourself. I think I would have benefited from having more on-hand examples.

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14 - It is being considered to restructure this course to be flipped classroom style in future years, with 5-10 minute videos to watch before class. Then, each class would be in a computer lab and consist of students writing code for predefined MPI or related examples on their own or in groups. Do you feel the course would be better taught in this format, remain as is, or change in some other way?

Response Rate	12/30 (40%)

• Some aspect of this would be helpful (see above).

• I think this would be much better. Forcing students to prepare 5-10 mins before class would make the content much easier to digest. See code on a presentation board, especially a library that's new to everyone is very hard to follow

• If it was still Professor Bienz teaching this would work well, but considering my experiences with the other CS professors I would be really hesitant to take this kind of class if it was being taught by someone else.

• Speaking from experience, I do not think "flipped classroom" is a good design for college courses. See my answer to the previous question. Another problem with this design is that it essentially turns class time into forced office hours. I would rather seek out help when I need it than be required to sit in class "re-learning" material I already understand. Instructors can also cover much more material in a lecture-style classroom rather than where students spend class time walking through examples. I would rather be taught too much in class and need to use my free time to "catch up" in contrast to having exercises tailored to mid-range students, finishing early, and leaving a portion of the class time wasted.

• Yes

• This suggested format is a great way for courses meant to teach some technical skills, such as MPI (and gain the algorithmic knowledge), and I think it would be an improvement. One of the directions I would have preferred is more outside or recommended materials to explore these topics better, so some additional videos to watch before class and applying the ideas would be an improvement.

• This is a decent idea, I don't know that I would personally prefer it. There is no harm in trying a different format for one semester as long as it's a little bit forgiving for the students just in case it's a train wreck.

• I think that it would help if it was more of a mixture of the current format and also lab style because that way we would be able to ask questions during the lecture and then maybe implement afterwards in the lab setting.

• This sounds like a great idea all around.

• I think that this format is too hands off. It would be better to have one lecture day and one lab day so that the difference is split.

• I think it would make the most sense to either keep the course format as-is or do a hybrid, where say half of the week is spent on lectures and the other half is spent in the lab writing MPI code.

• I think it would be nice if there could be a short lecture followed by a lab, rather than videos.

15 - Do you feel anything would have made in-class questions more useful in studying for the midterm? Please include if you would have preferred more in-class questions, preferred them to be outside of class, or preferred Canvas quizzes (meaning the format would be different than that of the midterm).

Response Rate	12/30 (40%)

• I thought the in-class questions were more helpful than not. I would have preferred these to be take home only and expand the questions, rather than use class time.

• I think a weekly quiz on canvas instead of in-class questions would be better

• I think the in-class questions were very helpful when studying for the midterm.

• I did not enjoy in-class questions for two reasons: 1, they took up 10 minutes at the end of class when we could have had a longer lecture, and 2, they covered topics we had just learned and may not be ready to apply yet. I think a better alternative are Canvas quizzes after each class, due at the beginning of the following class, that ask a few basic questions about the material we learned that day (saving more complicated questions for the homeworks). This format will allow us to revisit the material on our own time in a low-effort way (as the questions are basic) and increase our exposure to the material.

• NA

• It would depend on the intent of the in-class questions, but generally the in-class questions might be better as smaller take home assignments (or have them as quizzes). They did help in getting a better feel for the problems we were working on. Especially if the class direction shifted to working in a computer lab, moving to some additional quizzes or homework would allow the extra time that would have been spent on the in-class questions to instead be for hands-on lab time in a setting where we can ask questions about something while having the code up in front of us.

• I liked the in class questions and thought that most of them were pretty helpful. I think it is useful to have them in class, not on canvas, because it was a really good motivator to attend class everyday. I do suggest maybe a couple more at the end of the semester and also offer to drop one grade for the in-class questions just in case someone is sick on one of those days they are assigned. I did not experience such situation but I find it unfair for someone who can't help it.

• I think the in class quizzes seemed reasonable and well done

• I felt very prepared for the midterm, the existing format felt really effective so I wouldn't change it.

• No, I thought those questions helped me stay engaged and helped encouraged me to avoid falling behind in material. They helped me understand and think through concepts as well. I actually do think more in class questions would have helped. Even if they were credit/no credit but mandatory. In fact, I think that doing credit/no credit with more in class questions would have been extremely helpful.

• I don't think there are any changes that need to be made to in-class questions.

• I like the format of in-class questions, but I did appreciate when we had the option to take them home and finish them and bring them back. I think having until the next class period would be nice, just so that you don't have to rush if you're not sure about anything. I feel like one set per lecture was a good balance. I definitely found them extremely helpful when preparing for the midterm. I was happy with the midterm format, I think that it was very fair and a good overview of the (first half of) the course as a whole.