

Virginia Tech

Spring 2021 VT Student Perceptions of Teaching (SPOT)

Course: ME4524: Robotics & Automation-ME_4524_17155_202101
Instructor: Dylan Patrick Losey *
Response Rate: 33/36 (91.67%)

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

1A - The instructor was well prepared.

Dylan Patrick Losey

Response Option	Weight	Frequency	Percent	Percent Responses	Means									
Strongly disagree	(1)	0	0.00%		5.67	5.25	5.05							
Disagree	(2)	0	0.00%											
Somewhat disagree	(3)	0	0.00%											
Somewhat agree	(4)	1	3.03%											
Agree	(5)	9	27.27%											
Strongly agree	(6)	23	69.70%											
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
33/36 (91.67%)	5.67	0.54	6.00	20047	5.25	1.04	6.00	2074	5.05	1.25	5.00			

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.

Dylan Patrick Losey

Response Option	Weight	Frequency	Percent	Percent Responses	Means									
Strongly disagree	(1)	0	0.00%		5.33	5.05	4.80							
Disagree	(2)	0	0.00%											
Somewhat disagree	(3)	1	3.03%											
Somewhat agree	(4)	6	18.18%											
Agree	(5)	7	21.21%											
Strongly agree	(6)	19	57.58%											
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
33/36 (91.67%)	5.33	0.89	6.00	19918	5.05	1.20	5.00	2047	4.80	1.37	5.00			

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.

Dylan Patrick Losey

Response Option	Weight	Frequency	Percent	Percent Responses	Means									
Strongly disagree	(1)	0	0.00%		5.30	4.99	4.71							
Disagree	(2)	0	0.00%											
Somewhat disagree	(3)	0	0.00%											
Somewhat agree	(4)	4	12.12%											
Agree	(5)	15	45.45%											
Strongly agree	(6)	14	42.42%											
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
33/36 (91.67%)	5.30	0.68	5.00	19912	4.99	1.26	5.00	2047	4.71	1.44	5.00			

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Response Rate: 33/36 (91.67%)

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.													
Dylan Patrick Losey													
Response Option	Weight	Frequency	Percent	Percent Responses	Means								
Strongly disagree	(1)	0	0.00%		5.79	5.36	5.11						
Disagree	(2)	0	0.00%										
Somewhat disagree	(3)	0	0.00%										
Somewhat agree	(4)	0	0.00%										
Agree	(5)	7	21.21%										
Strongly agree	(6)	26	78.79%										
					0	25	50	100	Question	College	Department		
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median		
33/36 (91.67%)	5.79	0.42	6.00	19881	5.36	1.02	6.00	2044	5.11	1.28	6.00		

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.													
Dylan Patrick Losey													
Response Option	Weight	Frequency	Percent	Percent Responses	Means								
Strongly disagree	(1)	0	0.00%		5.33	5.04	4.78						
Disagree	(2)	0	0.00%										
Somewhat disagree	(3)	0	0.00%										
Somewhat agree	(4)	6	18.18%										
Agree	(5)	10	30.30%										
Strongly agree	(6)	17	51.52%										
					0	25	50	100	Question	College	Department		
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median		
33/36 (91.67%)	5.33	0.78	6.00	19790	5.04	1.23	5.00	2038	4.78	1.41	5.00		

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Response Rate: 33/36 (91.67 %)

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

Dylan Patrick Losey

Response Rate 25/36 (69.44%)

- I enjoyed having a consistent format for introducing new topics and then following through with specific examples. With topics necessarily being presented over multiple lectures, it sometimes felt discontinuous having a week in-between learning parts of the same concept, but the slide format made it easier to refer back.
- Professor Losey has a very methodical teaching approach that is very easy to follow, and his homework solutions make it quite clear when mistakes were made.
- Lecture notes
- instructor can slow down if we will learn some hard topics.
- The organization of slides and the method of conveying concepts relating it with real world examples whenever possible was really helpful and helped with retention of concepts better.
- Was very quick and responsive whenever we had questions about the homework or course topics.
- Great lecture slides and worked out problems. I also loved the tangents of related ideas in robotics.
- Each arrow or highlight or new line of equation in the slides was presented slide by slide, instead of going from top-level equation and skipping a bunch of steps. Each next small step of the problem solving process was a new slide.
- I felt that Dr. Losey put a lot of effort behind making this course. After 4 years of studying at Virginia Tech, I would love to say that this was the best class I ever took. I liked how he pitched his lecture with nearly 150 slides in a 75 minute class while making it interactive with discussions and videos. The videos helped a lot to relate this course with practical examples. I worried a little before taking this class when he said there will be lecture recordings, but I understood later on why he did that. He wanted to make this course interactive and open to discussions. Moreover, his lecture slides were so good that I never felt the need to read the book for this class.
- Dr. Losey created custom images and diagrams to visualize complex robotic topics. I really appreciated these images and his explanations, they helped immensely.
- Incredibly gifted communicator, teacher, and guide. Gives appropriate and sequential examples that help understand course material, created an interactive learning environment asking questions from class and waiting for a response (despite a VERY quite class), and showing interesting videos and sides on current applications or issues with robotics. 10/10 loved Dr Losey
- The slides were very well put together. Additionally, there were a lot of examples that didn't skip steps so it was easy to follow.
- Provide comprehensive lectures with plenty of examples for hard conceptual problems
- Professor Showcased how the concepts we learnt in the class apply to real life robots. The videos he showed were really helpful
- He encouraged people to ask questions whenever possible and answered them effectively
- He put out the discussion board, so I can get the answer if I got the same problem with other people.
- Relating the concepts to real world examples was very helpful and made me more interested
- Occasionally would go past the math and the specifics and talk about current challenges and research in robotics.
- Dr. Losey's slides are well organized and detailed, so that it is easy to look back on the slides and recall all of the concepts from lecture. He took time to discuss various aspects of robotics, which made the course more enjoyable.
- Was very knowledgeable about the subject that he taught.
- His powerpoints are the best I have seen in my 4 years of education. The way it explains information is unparalleled
- I liked that we did review of the past lecture at the beginning of class and that he included a conclusion summing up everything we learned at the end of each lecture, this helped refresh my memory of what we've been doing. It was also helpful that he went through the details of each example, even when it was repetitive and went through everything step-by-step when other professors might have just skipped the steps.
- The way the information was presented was really good. The way the slides were set up plus all the examples and class interaction made the class way more engaging than other classes.
- Dr. Losey was very well organized and updated his slides each meeting based on how far the class had gotten in the previous lecture. The brief summary of the last lecture before beginning the new one was very helpful. Additionally I found the Homework assignments to be extremely well written. I have spoken to some other students that mentioned that some of the problems were 1 step past what we learned in class. However, I found that these steps were instructive and that the problems were well enough subdivided to guide me through discovering how to complete anything not covered in class while further cementing the information by forcing me to think. I found the homework assignments to be very valuable.
- His teaching style was engaging and had good visuals as well as examples to keep the class engaged.

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%			5.64	5.16	4.95			
Disagree	(2)	0	0.00%								
Somewhat disagree	(3)	0	0.00%								
Somewhat agree	(4)	2	6.06%	█							
Agree	(5)	8	24.24%	█							
Strongly agree	(6)	23	69.70%	█							
				0 25 50 100	Question	College	Department				
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median
33/36 (91.67%)	5.64	0.60	6.00	18092	5.16	1.05	5.00	2044	4.95	1.20	5.00

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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%									
Somewhat disagree	(3)	0	0.00%									
Somewhat agree	(4)	6	18.18%	■								
Agree	(5)	8	24.24%	■								
Strongly agree	(6)	19	57.58%	■								
					0	25	50	100	Question	College	Department	
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median	
33/36 (91.67%)	5.39	0.79	6.00	18002	4.89	1.30	5.00	2039	4.62	1.44	5.00	

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

Response Rate 22/36 (61.11%)

- With everything else going on, it sometimes felt like I was playing catchup while working on the homeworks. Staying ahead feels particularly advantageous in this class.
- We had to write a lot of long MATLAB scripts for this class. I should have double checked mine for small mistakes more often.
- Finish HW on time
- I should pre-learn the concept so that I can have better understanding during lecture.
- Read more from the textbook and solved more example problems
- Gone to every class.
- More handwritten notes
- Been a little more fresh on Matlab and control theory. My controls class was during the first semester of COVID, so the quality of learning that information was not super high after we went online for the first time.
- Starting assignments early and reading textbook with before/after lectures.
- Start the homework a week in advance, so that I wouldn't have to do it in one huge chunk.
- Read more of the textbook content, and reviewed lectures before class to refresh my memory.
- I could have read the textbook better. I felt that whenever I tried to use the Modern Robotics Book I got more confused, so I stuck to the notes.
- Started Hw earlier and kept myself more organized throughout the semester
- Revisit all the code examples showed in the class and try to write them on your own, and try to make all the edge cases work.
- Nothing
- N/A
- Prepare more ahead of the lectures and pay more attention in class
- Office hours. Started homework earlier
- Find more recourses to help me study and better my understanding of the concepts taught in the course.
- Been in more in-person settings.
- I missed a few lectures at the end of the semester due to needed to be in the lab to finish my senior design project. I could have, and would have liked to watch these lectures if I had more time.
- I could have went to office hours more.

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

Dylan Patrick Losey

Response Rate	24/36 (66.67%)
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- I understand not recording lectures incentivizes people to show up, but I believe the same thing would be accomplished by grading attendance. It's a difficult course and not everyone wants to/can attend office hours for something they otherwise could pull up in a video.
- I still believe the midterm was probably a question or two too long. I have not felt that rushed on a test in a very long time, and while some of that can be attributed to the test being somewhat different from homework, I stand by my position.
- N/A
- Wish could hold more office hours since we do have lots of questions when doing homework but no one could answer them.
- I hope professor can give us answer and MATLAB code for each homework after the deadline.
- Overall the teaching was very effective and I have genuinely developed an interest towards robotics and will consider it as an option for my graduate studies. One thing that can be incorporated for future cohorts of this class would be including examples which are more representative of the problems being given out as homework. Some homework problems were a big step up from what was explained in class and I had to refer some external material to get started on solving those problems. Another thing is the format of the test, I felt we were short on time and could not solve all the problems given the amount of calculations expected for some of them, I feel that could have been changed by allowing use of calculators maybe.
- The lecture slides were detailed, but as someone who wants to write on the slides, having each transition be a different slide made it very difficult. This also led to excessively long notes for a lot of repeat information. I would love if those transitions could be done in the slide rather than separate slides, to reduce the length.
- Prof Losey was super understanding of the struggles we were having, with the class content or just as seniors with a lot of life stuff going on. He always was willing to help us figure out questions we had on homework, or questions in class. The asides about robotics were super useful, as well as the report was a nice way to learn more about a robotic system I had worked on during an internship. I would definitely make the new controls class a prerequisite if it is not already. I would also mention that it is Matlab heavy in the class Add/Drop description, I had figured but I imagine that might be a determining factor of whether students can do well in this class or not.
- I really appreciate that he taught this course. He fostered an environment of mutual respect, was always open to discussions, not only a good speaker but a good listener as well. Senior year was hard on some students with extra course load and especially senior design. I liked how understanding he was and provided HW deadline extensions. I also liked how engaging his lecture slides were. Reading them made me feel that I was listening to a live lecture. Overall, good job teaching this course!
- The one part I disliked about the course was the bi-monthly homework assignments. I wish they were broken up and weekly, so that the work flow would be more consistent.
- I went back and checked and I didn't see controls as a prereq for this course. I took vibrations and not controls (since we were given a choice, and had to do some research on my own to learn about root locus plots and various other topics. In addition, it would have been helpful if Dr Losey recorded lectures and posted them on canvas, but understand that he wanted attendance synchronously.
- I found Dr. Losey's use of animations in his presentations during lecture to be very helpful but hated the way he posted the presentations as PDFs on canvas to serve as notes. Each animation was saved as its own page, resulting in over 100 pages for each lecture. Not only was this number of slides excessive, finding the small difference between nearly identical slides was like a game of "where's waldo." Another complaint is that the homework due dates did not take into consideration when the material would be covered in class or the timing of office hours. On several occasions, the material required to complete the homework was not fully presented until the day before the homework was due so there were no opportunities to ask questions at office hours (which, due to scheduling conflicts, I was rarely ever able to attend anyway). Dr. Losey encouraged us to use the discussion boards, but the responses were not always timely or helpful.
- While I understand the advantage of doing things symbolically, Personally I do feel as if concrete examples with real numbers would help convey the ideas in lecture more clearly. Also for the homeworks, I highly advocate for giving what amounts to a sanity check at the end of each part of a problem. Maybe not the explicit answer, but something that will be right if the overall answer is right. I have had a few classes do this and it has helped learning immensely.
- I would love if professor discussed some things in more detail. At some places I felt like the course was more like a survey course rather than a technical elective. The topic of robotics is vast, however, learning something in detail would be better. Furthermore exams had a different format. Rather than using the codes developed in the class we had written test, which I felt didn't reinforce the robotics concepts that well as if take home tests would do.
- Would have been helpful if the teacher provided the correct answer along with the homework, because due to the often tedious math involved in this course there were multiple times where I had no way of knowing if the answers I provided on a hw question were correct, or if I was even doing the correct procedure. Also, his lecture pdfs often presents information incompletely, forcing me to study the subject through the internet to better understand some of the hw questions he assigns.
- N/A
- Enjoyed the class a lot. Only problem was there were a lot of slides posted. Made it more difficult to go back and study.
- This course was scheduled quite tightly. There were a couple of occasions when homework would be due on Friday at 6pm, but all of the content required to complete the homework wouldn't be covered until the lecture on Thursday afternoon, just a day before the homework was due. This, combined with the fact that Dr. Losey has limited office hours once a week on Wednesdays for 1h, and also that he does not answer discussion board questions posted Friday morning until 5pm on Fridays, made it difficult for students if they needed help. I hope Dr. Losey will consider the fact that students have to juggle many courses at once and avoid scheduling things so tightly in the future. Additionally, I think that Dr. Losey was far more helpful during office hours than on discussion board replies, which is why I hope that he will consider scheduling more office hours around deadlines, so that students can fully get the help that they need. It's likely that nobody showed up to half of his office hours (on weeks when no assignment was due) because not enough content was covered at that point to solve more than one problem on the homework. Additionally, having only one hour per week runs the risk that students may not be available during that time. While it is nearly impossible to have office hours that will accommodate every student's schedule, I think it would have been more effective if he had held office hours at 2 different times on the week of deadlines, and maybe just saved the week when students were unlikely to show up. The midterm exam had easy questions, but it was far too long and involved a lot of matrix math without the aid of any calculator. I don't believe this is a good format for an exam because it doesn't necessarily test the students' knowledge; it tests how fast their mental math skills are.
- Professor Losey was a great professor and taught the course well. He was respectful and very organized which lead to a satisfactory learning experience. However, given the hybrid mode of teaching, it would have been helpful to have recorded the lectures and posted them after each presentation. This would have helped students keep up with the material more effectively, and aid in successfully learning the material. The lecture slides were also formatted more for presenting than review, so when a concept or example needed to be viewed within the lecture slides at a later point, it was very hard to navigate the 100+ slide lecture files without getting lost.
- He was relatable and enthusiastic. Even though robotics is not my passion, it was a breath-of-relief to see that type of passion in someone else. He consistently related theories to real-world applications.
- Prof. Losey was an amazing professor. He taught the material very clearly and was obviously very well-prepared. I also liked that he included "breaks" during some lectures where he would discuss real-world robotics examples, this helped me stay attentive and made me more interested in robotics as a whole. Prof. Losey was also very approachable and respectful, he did not make me feel intimidated to ask questions. The course overall was good, I think it would have been better with a lab portion where we could apply what we learned to real-life robots, but I know that COVID kind of prevented us from this.
- I liked the powerpoints for the live lectures with the slides only displaying the information as you talk about it, however it makes it a lot more difficult to review after the fact since now ever "slide" is really 10 slides. I wouldn't change how do lectures, but it would be helpful to have a condensed version of the slides.
- It might be a bit of a pet peeve, but one thing I found kind of frustrating was how Prof. Losey doesn't use slide animations to add new material as he's presenting, he just uses like 5 different subsequent slides. It makes all the slide decks over 100 slides, and it can make it really difficult to find the information I actually need when doing my homework.

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Response Rate: 33/36 (91.67 %)

• The course was very well put together. I have never taken a robotics class and I now feel like I can solve robotics problems. Without this class my senior design team would not have completed their project. I do wish that the homework assignments would have the numerical answers posted. Because so much of the homework is about the process, I feel that if the assignment was graded based off submitting the work/code used to get to the answer, providing a numerical answer to let the student know if they did the problem correctly would not be detrimental to the assignment. In most cases if I know I am wrong, I would fix mistakes and learn the material better. If I'm provided the solutions after I tend to briefly look at them, or not at all, and end up not learning the material as well as if I were to solve the problem correctly myself.

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Instructor: Dylan Patrick Losey *
Response Rate: 33/36 (91.67%)

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

I improved my ability to problem solve.

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)	6	18.18%	█										
Agree	(5)	13	39.39%	█										
Strongly agree	(6)	14	42.42%	█										
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
33/36 (91.67%)	5.24	0.75	5.00	18080	5.10	1.03	5.00	2041	4.94	1.13	5.00			

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

The textbook or course readings made a valuable contribution to my learning.

Response Option	Weight	Frequency	Percent	Percent Responses	Means									
Strongly disagree	(1)	1	3.03%											
Disagree	(2)	5	15.15%	█										
Somewhat disagree	(3)	5	15.15%	█										
Somewhat agree	(4)	5	15.15%	█										
Agree	(5)	6	18.18%	█										
Strongly agree	(6)	11	33.33%	█										
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
33/36 (91.67%)	4.30	1.59	5.00	17973	4.60	1.41	5.00	2033	4.46	1.44	5.00			

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

The objectives of the course were clearly explained.

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	9.38%	█										
Agree	(5)	14	43.75%	█										
Strongly agree	(6)	15	46.88%	█										
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
32/36 (88.89%)	5.38	0.66	5.00	18030	5.11	1.09	5.00	2043	4.93	1.23	5.00			

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

The out-of-class assignments were educationally valuable.

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	9.09%	█										
Agree	(5)	17	51.52%	█										
Strongly agree	(6)	13	39.39%	█										
					0	25	50	100	Question	College	Department			
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median			
33/36 (91.67%)	5.30	0.64	5.00	17915	5.07	1.13	5.00	2024	4.90	1.25	5.00			

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7 - The instructor related theories and concepts to practical issues.													
Dylan Patrick Losey													
Response Option	Weight	Frequency	Percent	Percent Responses	Means								
Strongly disagree	(1)	0	0.00%			5.73		5.27		5.15			
Disagree	(2)	0	0.00%										
Somewhat disagree	(3)	0	0.00%										
Somewhat agree	(4)	0	0.00%										
Agree	(5)	9	27.27%	█									
Strongly agree	(6)	24	72.73%	██████████									
					0	25	50	100	Question	College	Department		
Response Rate	Mean	STD	Median	College	Mean	STD	Median	Department	Mean	STD	Median		
33/36 (91.67%)	5.73	0.45	6.00	19682	5.27	1.01	6.00	2046	5.15	1.11	5.00		