### **Course Evaluations**



#### **Full Report**

Evaluation for 2022 - Winter

Course Code (Section)		Response Rate (Respondants/Enrolled)
СНЕМ ЗРАЗ	Ayers, Paul	35.71 % (5/14)

1. Overall for this course, how would you describe your learning experience? 1-Very Poor 2-Poor 3-Acceptable(-) 4-Acceptable 5-Acceptable(+) 6-Good(-) 7-

Good 8-Good(+) 9-Very Good 10-Excellent

1 student ( 20% ) said: 2 2 students ( 40% ) said: 8 1 student ( 20% ) said: 9 1 student ( 20% ) said: 10

Median: 8 Mean: 7.4 StDev: 2.8 Variance: 7.84

2. How do you rate the overall organization of the course including the instructor's response to students (approachability, attitude, availability, timing and appropriateness of feedback)?

1-very poor 2-poor 3-acceptable 4-good 5-very good

1 student ( 20% ) said: 3 4 students ( 80% ) said: 5

Median: 5 Mean: 4.6 StDev: 0.8 Variance: 0.64

3. What was effectiveness of the learning resources available for the course? Resources include but are not limited to textbook, course notes, Avenue to Learn material?

1-very poor 2-poor 3-acceptable 4-good 5-very good

2 students ( 40% ) said: 4 3 students ( 60% ) said: 5

Median: 5 Mean: 4.6 StDev: 0.4899 Variance: 0.24

4. How much did this course contribute to skills development in the discipline? Exampleas of skills include critical thinking, problem solving, synthesis, research, laboratory or writing skills.

1-not at all 2-below average 3-average 4-above average 5-to a great extent

1 student ( 20% ) said: 1 1 student ( 20% ) said: 3 2 students ( 40% ) said: 4 1 student ( 20% ) said: 5

Median: 4 Mean: 3.4 StDev: 1.3565 Variance: 1.84

## 5. If this course had TAs, comment on the effectiveness of your TA in this course.

1-Very Poor 2-Poor 3-Acceptable(-) 4-Acceptable 5-Acceptable(+) 6-Good(-) 7-Good 8-Good(+) 9-Very Good 10-Excellent

1 student ( 20% ) said: 7 1 student ( 20% ) said: 9 3 students ( 60% ) said: 10

Median: 10 Mean: 9.2 StDev: 1.1662 Variance: 1.36

# 6. Identify at least two aspects of this course that you thought were particularly effective. Provide a brief explanation.

1. All course material was easily accessible and clear. Even though this was a slightly unconventional method of teaching, Dr. Ayers provided countless resources to help us and allowed me to learn at my own pace and on my own time. The information on the website was very helpful, and made it so that I barely had to google things - that is how clear everything was! 2. The constant support from the professor and TA. Dr. Ayers and Rik were always around to provide assistance or clarification to any issue with course content or assignment material. They were always eager to help and very supportive, which made it very easy to go talk to them!

I enjoyed this new style of class, with the integration of code. There are a lot of chances to ask questions with a lot of office hours to be able to come and ask questions. I also think that the class is very reasonable in a sense since it is not an easy topic but with great support and teaching I think there is a very good opportunity to learn.

I really appreciate how approachable both the prof and TA were in this course. It was incredibly clear they both wanted us to learn and do well. It is by nature an incredibly tough course, but it is also obvious that they were really focused on us learning, rather than us getting good grades. The notes were intensive, but really informative. There was a lot going on and a lot of course content to cover, but the notes did a good job of guiding us through in a logical way.

Learning something complicated/difficult with very low pressure was a game-changer. I've never had the opportunity to learn something in a course without being worried about memorizing everything for a midterm and worrying about how I would do. Learning based on questions/examples in class and assignments was so much better than stressing about tests. I learned far more this way, and it didn't eat up as much of my time. The notes on the course website were very clear. Also, there were many opportunities to earn extra credit so that relieved some pressure if things got really busy. Overall, the non-traditional grading scheme and learning style was helpful. Prof and TA were always available to help I liked using GitHub for

assignments because it was easy to see if I was right/wrong so I could go back and fix things. Prof was very understanding of other coursework

our TA, Rik is the best! Also Dr. Ayers is extremely organized and very dedicated to provide good course delivery.

# 7. Identify at least two aspsects of this course that you thought particularly need to be improved. Provide a brief explanation.

1. The one-hour per week lectures. Even though the content on the course website was clear, there were times, especially towards the end with the harder content, that I found myself struggling to understand. In the future it would be more helpful to have a bit longer lecture time to more thoroughly go through the content (especially for the content that is a bit heavier). 2. More videos/modules. I myself am more of a visual learner, so if there are concepts that can be clarified or demonstrated in a YouTube video or module, that would be extremely helpful to further understand the concepts.

I think there are points were things are a bit faster and a bit slow. There are some early topics which are paced a little slow compared to some later topics which are a bit faster but this is a minor issue since there is a reasonable deadline.

More timely grade updates - some points weren't updated for a really long time The TA went through examples way too quickly sometimes - I was trying to keep up with the writing rather than understanding what he was doing. As a result, I understood the examples better in the weeks where I was in the prof's group Fewer assignments all at once

The course content is extremely unreasonable and difficult. I don't know why the university would put this course in our requirement. We literally have almost zero math and physics foundation and most of the time we are just staring at the screen and struggle with almost everything. I'm willing to learn but I have no idea where to start. All of my classmates are facing the same situation.

While the notes were really well written, I feel as though having a section on each note where everything is presented in layman's terms to help us get a grasp on what we are trying to know before taking a deep dive into the math of quantum mechanics may help to pull students back from the overwhelming nature of the content. A possible way of fixing this is to add generic examples with actual numbers (like example knowledge test questions) to help make sure we have a jumping off point. The technology component of this course was difficult, as it forced us out of our comfort zone. This is not necessarily a bad thing, though it made an already overwhelming course seem so much more difficult. The combination of teaching ourselves linear algebra, more calculus than most of us know, Python, and the GitHub interface, on top of the self-directed style of quantum mechanics was a lot. There is not an easy fix for this, I understand why it was done this way, but possibly migrating quizzes over to Avenue to allow for some sense of familiarity for students may be helpful. GitHub makes sense once we are used to it, but getting there is a frustrating process to tack onto an already stressful course.