



# Student course evaluations

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## Overview

This document contains a summary of most of the course evaluation forms I’ve collected since joining the Saint Mary’s faculty in 1993. It is offered to any student wishing to learn more about what to expect from me as a professor from the experience of peers and predecessors. As a document prepared only recently (January 2022), it relies on the completeness of files stored—some for decades—in my filing cabinet and, as such, these data are incomplete. For example, while I taught the first year University Physics I and II for several years, I could find course evaluation forms only for the fall of 2003. Given the size of this class (at times near 200), it’s likely I may have purged most of them in an effort to make room in my finite filing cabinet; I don’t recall.

These summaries—including those from discontinued courses—are organised by course roughly in the chronological order in which students would take them. In the 2006–07 academic year, both the course number scheme and the format of the evaluation forms changed. Prior to Fall 2006, courses used a three-character and three digit numbering scheme (*e.g.*, PHY 425 for Quantum Mechanics I) and students filled out what were then called “Course Evaluation Forms”. On the CEF, questions 1–9 were statistical data gathered from the student (year of study, programme, *etc.*) while questions 10–21 were for the student to evaluate the course itself, responses to which are summarised herein.

In particular, questions 10–16 asked if the instructor:

- Q10. made students feel free to express their ideas in class;
- Q11. was fair and impartial;
- Q12. had adequate vocabulary and enunciation for teaching;

- Q13. used enough examples to clarify material;
- Q14. stimulated students' interest in the subject;
- Q15. had mastery over the subject; and finally
- Q16. what the student's considered opinion of the instructor as an educator was.

The remaining questions 17–21 asked about the course itself, namely:

- Q17. were the objectives clear;
- Q18. was the amount of assigned work appropriate;
- Q19. were assigned readings appropriate and useful;
- Q20. did labs and tutorials aid in understanding, and finally
- Q21. what was the student's considered opinion of the course?

Class averages for each of these questions are tabulated below under column headings Q10, Q11, *etc.*, and results for Q16 and Q21 (those used by the university's promotion and tenure committee to evaluate a professor's teaching effectiveness) are listed in bold face.

In fall, 2006 the university adopted a four-character, four-digit course numbering scheme (*e.g.*, PHYS 3500 for Quantum Mechanics I) and the CEF were replaced with the much longer (31 questions plus statistical data) "Instructor and Course Evaluation" (ICE) forms in current use. Questions 1–29 are divided into eight categories, while Q30 and Q31 replace Q21 and Q16 respectively on the CEF; those the university uses to evaluate faculty promotion and tenure. The eight categories (averages of which are listed in the tables below) come under the headings (given in italics) of:

- Q1–4. qualities of the course that helped in *Learning*;
- Q4–8. *Individual Rapport* with students, including accessibility, friendliness, *etc.*;
- Q9–12. *Enthusiasm*, energy of presentations, humour, *etc.*;
- Q13–15. Fairness and appropriateness of *Examinations*;
- Q16–19. *Organisation*, clarity, preparedness of lectures, ability to take notes, *etc.*
- Q20–23. *Breadth* of materials presented in class;
- Q24–27. *Group Interaction*, *e.g.*, ease of asking questions, discussing ideas, *etc.*
- Q28–29. value, helpfulness, and appropriateness of *Assignments*.

*Category* averages are given in the tables below under column headings Q1–4, Q5–8, *etc.*, while the all-important questions Q30 (how good is the course) and Q31 (how good is the instructor) are listed separately in boldface.

For both the pre-2006 CEF and the post-2006 ICE forms, one can consider scores 5, 4, 3, 2, and 1 to represent respectively *excellent*, *good*, *fair*, *poor*, and *unacceptable*. The row headings, for example F03 and W11, evidently mean the fall 2003 and winter 2011 terms respectively, while the column headed with the pound sign (#) indicates the number of students filling out the form in that term.

Finally, I give a "selection" of student comments from each course collected over the years roughly in chronological order. I describe further what I mean by "selected" at the end of the document.

## University Physics I

### PHY 210

term	#	Q10	Q11	Q12	Q13	Q14	Q15	<b>Q16</b>	Q17	Q18	Q19	Q20	<b>Q21</b>
F03	88	3.7	4.0	4.2	3.9	3.6	4.6	<b>3.9</b>	4.0	3.7	4.1	3.6	<b>3.4</b>

### Selected comments

*Dr. Clarke is an outstanding professor. He dedicates a lot of his time to students making sure they understand the course material.*

*Clarke is very open to helping students at any time and is very comprehensive. Tutorials are an advantage but the labs did not aid in my understanding at all.*

*Your extra help was greatly appreciated. You make the students feel more confident when they know they can come to you for help. If it wasn't for you, I would fail this course.*

*Excellent teacher, leaves nothing to chance. Everything is explained clearly and carefully.*

*The instructor is a poor teacher even though he is very knowledgeable. The tutorial instructor (Josh Bray) actually taught the class.*

*Good prof. Lecture notes on board are excellent; very clear and concise. Labs and tutorials are very helpful.*

*He knows his stuff, and gives interesting examples; more of these would have been nice.*

*Very well presented with excellent enthusiasm about the subject. Lots of examples in lecture and always available during office hours; works very well one-on-one.*

*I like the fact that he does enough problems to understand the work, and does it with enthusiasm.*

*Lots of good examples and lots of opportunity to get extra help.*

*I like how the examples are shown step-by-step and explained in full detail.*

*Not enough relevant examples in class. Examples done seemed more complicated than they needed to be.<sup>1</sup>*

## Vibrations, Waves, and Optics

### PHYS 2300

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	<b>Q30</b>	<b>Q31</b>
F12	15	4.1	4.8	4.4	4.0	4.1	4.0	4.1	4.3	<b>3.8</b>	<b>4.3</b>

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<sup>1</sup>It's all in the eye of the beholder, it would seem, as this comment compared to the previous four illustrate.

## Selected comments

*His answers to the quizzes and assignments were much more helpful than the text.*

*Very enthusiastic and always willing to help.*

*The fact that his office door is always open is valuable to students.*

*Energetic and well-prepared. But he has to slow down, and connect the physics to the math better.*

*Explained things very well, his humour and demonstrations really helped our understanding. Always willing to help, office hours very helpful.*

*Best professor at SMU so far. Available during and off his office hours near 24/7.*

*Slow down!*

## Analytical Mechanics

### PHYS 2301

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	Q30	Q31
W11	10	4.0	4.3	3.7	3.5	3.9	3.8	3.5	4.4	<b>3.7</b>	<b>3.4</b>
W12	11	4.3	4.9	4.8	4.2	4.5	4.4	4.1	4.7	<b>4.4</b>	<b>4.6</b>
W13	10	4.3	4.9	4.5	4.3	4.6	4.2	4.3	4.6	<b>4.1</b>	<b>4.7</b>
W14	11	4.4	4.7	4.5	4.0	4.7	3.8	4.1	4.6	<b>4.1</b>	<b>4.4</b>
W16	10	4.3	4.5	4.8	4.2	4.3	4.1	4.3	4.2	<b>4.2</b>	<b>4.6</b>
W17	7	4.4	4.4	4.5	4.4	4.6	4.2	4.4	4.2	<b>4.0</b>	<b>4.4</b>
W18	8	4.5	4.8	4.6	4.8	4.7	3.9	4.4	4.5	<b>4.5</b>	<b>4.9</b>
W19	13	4.4	4.7	4.4	4.4	4.4	4.2	4.3	4.4	<b>4.4</b>	<b>4.6</b>

## Selected comments

*Being available for extra help is perfect. Would say by far the most helpful teacher.*

*Excellent teacher, just expects way too much from us. Someone else should write his exams for him.*

*A recitation for the course would be very helpful.<sup>2</sup>*

*A recitation where the material is applied would be very effective.*

*Enthusiastic and available for questions during office hours. Perhaps a tutorial could be added, and/or extra practise problems?*

*The class material was not adequately explained, and it was rare that I actually knew what was going on in class. For the most part, the textbook provided a better explanation.*

*I felt very comfortable seeking help outside of class.*

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<sup>2</sup>It was on this and similar other requests that I began a *pro bono* tutorial in 2012. For reasons only they can explain, the department and dean shut these down five years later.

*A weekly tutorial might help with the learning process.*

*Dr. Clarke is a good teacher but a hard marker/examiner. Too many twists.*

*Dr. Clarke is very enthusiastic in the way he teaches and makes what could otherwise be a fairly dry subject (if taught by someone else) interesting. Also great for extra help and feedback.*

*Very approachable, well-mannered, friendly nature. Tutorials were very helpful.*

*Endless office hours and enthusiasm. Great notes.*

*Clarke is the man! Very enthusiastic and can keep my attention. There isn't one bad thing I have to say about the guy; give him a raise!*

*Despite the difficulty of the course material, this course was a very rewarding and valuable experience, particularly due to Dr. Clarke's constant support and availability outside class, amazing explanations, and enthusiasm!*

*Good job of making a lot of difficult material less difficult.*

*The extra tutorial sessions and having the assignment solutions on-line have helped.*

*Dr. Clarke is excellent. He's a very enthusiastic prof and challenges us so that we have a good understanding of the material.*

*Excellent prof; very organised and helpful. Party was awesome, and very appreciated!*

*Always there when I need assistance.*

*"You've been Clarked" should not be such a common expression!*

*Very helpful when students have questions, very friendly, approachable. Writes everything on board, very helpful for taking notes.*

*He genuinely cares about the student, However, he needs to update his teaching method; the class shouldn't be just 70 minutes of writing.*

*Loved the material he was teaching which was apparent through his lectures.*

*The extra tutorial sessions were helpful, especially to go over concepts that were not understood in class.*

*I enjoyed how organised the notes were as that helps when going back to review. Very helpful and understanding outside of class.*

*Excellent course structure, knew exactly what was happening at all times. Easy to approach and explained things in perfect detail.*

*Weekly tutorials and having practise problems on assignments is a great help.*

*This course taught me an entirely different way of learning and thinking, which I consider extremely valuable.*

*Possibly the best professor I will ever have; definitely the best so far. Literally nothing could be done to make me get any more out of this course.*

*Dr. Clarke is the bomb! He's perfect!*

*Demonstrations of unintuitive problems (such as the Atwood machine) really helped make the weird things we were talking about seem more real.*

*Lectures and notes were very well thought out and planned. Very good teaching style, humour, attitude, pretty much everything. Also, the party was awesome!*

*Very friendly to students, always willing to help.*

*Very clear and professional, tutorials are very helpful.*

*Great prof, makes you feel welcome to ask questions.*

*The professor clearly knows what he is doing. He somehow made a topic I thought of as mundane so much more interesting.*

*VERY good lectures that were well-prepared. Readily available during office hours.*

*Very organised, material presented very well. Homework and midterm questions were very similar to what was done in class.*

*Very organised. Graded work/tests were very fair and we were well prepared.*

*Coming to this class, I expected the worst. I didn't think it would turn out to be one of my favourite classes! Professor Clarke is a fantastic instructor who never hesitated to help with excitement and a genuine interest in seeing his students improve and understand.*

*Hopefully, a tutorial can be considered for this course as having extra time to work on questions with Dr. Clarke would be very beneficial.<sup>3</sup>*

*Excellent notes, very charismatic and nice. Does a great job of making the course enjoyable.*

*Assignment and practise questions were well chosen and carefully crafted. Class content as delivered effectively.*

*Notes were easy to take and examples provided were valuable. Tutorials with provided answers as practise is key for this course.*

*Dr. Clarke is very well versed as a teacher and this experience shows.*

*The energy of the class was helpful in keeping my interest.*

*Keen to help students, well-prepared material, very accessible during office hours, clear explanations, very approachable. Excellent!*

## **Mechanics I**

### PHYS 2302

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	Q30	Q31
F19	21	4.0	4.5	4.4	3.7	4.2	4.1	4.2	3.6	3.4	4.3

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<sup>3</sup>2017 was the year the department and dean shut down the tutorials for “pedagogical reasons”.

## Selected comments

*His energy and neat hand-writing made it easier to follow and understand what was being taught; feedback on work was excellent.*

*Dr. Clarke was very friendly during office hours and would help with any questions that were brought to him. He, himself, is a good teacher.*

*Professor was great at explaining things, classes were useful and helpful.*

*Really nice having sample problems on the assignments as well as formula sheets/handouts on-line. Super helpful office hours.*

*All lectures made for really good notes to study from.*

*Very good at giving extra help, very much appreciate the constant accessibility.*

*This course was a big step from first to second year, which may affect students' success.*

*I like how he explains every detail you need to know. Nice guy.*

*Really helpful when you have questions. Funny.*

*Best characteristics are his humour, fair marking, and helpful answers to questions about assignments.*

*I really enjoyed your class. Even if I never hated assignments as much as I hated yours, they helped me understand the concepts and appreciate the content of the course. What I learned in this course is more than all my other physics and calculus courses combined.*

## Introduction to Mathematical Methods in Physics

PHY 335 (until winter, 2006)

term	#	Q10	Q11	Q12	Q13	Q14	Q15	<b>Q16</b>	Q17	Q18	Q19	Q20	<b>Q21</b>
F01	6	4.2	4.7	4.5	3.7	4.3	4.7	<b>4.7</b>	3.5	3.8	3.3	4.0	<b>4.0</b>
F03	16	4.1	4.6	4.4	3.9	3.8	4.8	<b>4.5</b>	4.0	3.9	3.5	4.1	<b>3.8</b>

## Selected comments

*David is vary patient to explain the information to us, more than once if needed.*

*Textbook seems over my head, but still usable.*

*The scope of the course is too broad; it should focus on either intro to math methods or intro to computational methods, but not both.<sup>4</sup>*

*A very well organised presentation; easy to follow.*

*The course is well organised, presented well, and relates to other courses well.*

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<sup>4</sup>In answer to this and other similar comments, a separate computational methods course was developed by myself, while this course just focused on the math.

*Good applications, and assignments are well thought out.*

*Class is fast-paced, but all material adequately presented; rarely any confusion. The tutorials are invaluable as a complement to the class.<sup>5</sup>*

*Tutorial is a great benefit to the course.*

*The tutorials for the course are done well. Josh's method of teaching helps a lot in understanding the material.*

*Thanks to the tutorial we had every week, it was much easier to make sure I understood the material in class. The assignments were hard, but helped me prepare for the exams.*

*Tutorials are great. Josh is a superb educator and a great addition to (almost a vital component of) the course.*

*The notes taken in class were presented in a very well organised manner and made studying much easier than many other classes.*

*The instructor's lectures are very clear, and the tutorials make the course much easier for the student.*

*Very easy to follow in class. Perhaps there could be some handouts to go along with the advanced text to make things easier to understand.<sup>6</sup>*

*Excellent course overall. The assignments and tutorials were very well coordinated with what was being taught. However, I do not like the text one iota!<sup>7</sup>*

#### PHYS 2335 (from fall, 2006)

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	Q30	Q31
F06	11	4.5	4.9	4.5	4.4	4.6	3.8	4.5	3.5	4.4	4.8

#### **Selected comments**

*Always available for extra help and made sure you understood if you didn't at first.*

*Instructor was very organised, clearly has complete understanding of the material. Always answered questions until student was satisfied with answer.*

*Dr. Clarke is very helpful outside of class and very easy to meet with as he is always willing to make time. Tries his best to make boring material interesting.*

*Great balance between examples and notes. Great lecture style.*

*Tutorials very helpful, as were assignments. Instructor very good at explaining difficult concepts and was always available for extra help if needed. However, course textbook was pretty useless.*

<sup>5</sup>The tutorials in Fall, 2003 were handled by Joshua Bray, then a fourth-year physics student.

<sup>6</sup>To this and other similar comments, I developed over the years dozens of handouts for my various courses, all made available from my course web-pages.

<sup>7</sup>The text used was Arfken, Weber, and Davis, a clearly 3<sup>rd</sup> and 4<sup>th</sup> year level text, not particularly well suited for 2<sup>nd</sup> year. However, it was used because it had all the material for the course and so that students could use this same text in the two third-year Math Methods courses, where they learned to appreciate the text much better!



## Mathematical Methods in Physics I

PHY 451, 435 (until winter, 2006)

term	#	Q10	Q11	Q12	Q13	Q14	Q15	<b>Q16</b>	Q17	Q18	Q19	Q20	<b>Q21</b>
F93	3	4.7	4.3	4.3	4.3	4.7	4.7	<b>4.7</b>	4.3	4.7	5.0	4.3	<b>4.7</b>
F95	5	4.4	4.0	4.0	4.0	3.8	3.8	<b>4.2</b>	4.2	3.8	4.0	4.2	<b>4.2</b>
F96	4	4.8	4.5	4.8	4.3	4.0	4.8	<b>4.8</b>	4.0	4.8	4.5	4.3	<b>4.3</b>
F97	5	4.6	4.6	4.3	3.2	3.2	4.2	<b>3.8</b>	4.6	4.8	4.6	4.6	<b>4.4</b>
F98	12	4.3	4.1	4.3	3.3	3.4	4.4	<b>4.2</b>	3.9	3.4	3.5	3.6	<b>3.8</b>

### Selected comments

*The course is very useful and applies to just about everything in physics.*

*Accessible office hours and tutorials are helpful.*

*The tutorials were a BIG help; they provided an opportunity to pose questions that may have arisen after class.*

*Well-structured, I knew exactly where everything was going. I like the course content; it seems rather useful.*

*Great course, great instructor; you know exactly what you're doing.*

*Good class. Examples help clarify work and tutorials are useful too.*

*Assignments are very comprehensive, optional tutorials are well-appreciated and needed.*

PHYS 3200 (from fall, 2006)

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	<b>Q30</b>	<b>Q31</b>
F12	6	4.4	5.0	4.9	4.5	4.6	4.3	4.5	4.8	<b>4.3</b>	<b>5.0</b>
F13	7	4.1	4.9	4.6	4.6	4.6	4.2	4.3	4.4	<b>4.3</b>	<b>4.9</b>
F15	11	4.3	4.5	4.4	4.2	4.4	4.0	4.2	4.2	<b>4.0</b>	<b>3.9</b>
F16	8	4.0	4.5	4.3	3.7	4.2	3.7	4.1	4.1	<b>4.0</b>	<b>4.3</b>
F17	6	4.3	4.7	4.6	4.6	4.8	4.0	4.3	4.5	<b>4.7</b>	<b>4.8</b>
F18	9	4.0	4.9	4.4	4.2	4.2	4.2	4.2	3.9	<b>3.3</b>	<b>4.4</b>
F19	10	4.0	4.5	4.4	3.7	4.2	4.1	4.2	3.6	<b>3.4</b>	<b>4.3</b>

### Selected comments

*Instructor is very enthusiastic which helps to get the students interested in the material, even when students interest initially is not very high.*

*Office hours are the best! Good thing, because Clarke tends to move at the speed of light while teaching!*

*Systematic and enthusiastic presentation of material, as well as great availability for questions outside class made this course not as overwhelming as it would have otherwise seemed. Thank you very much!!! 😊*

*The fact that your door is literally always open is great!*

*Very friendly, but slow down!!*

*Very easy to see during office hours; made going to ask questions easy.*

*Good availability outside of class. Meaningful assignment questions help in learning the subject.*

*Super friendly when going to office hours; has lots of ways to help a student.*

*I never left his office hours confused, gives good explanations, clearly knows all his material, is never not present to tackle your questions.*

*Dr. Clarke is very good at explaining lecture topics clearly, and I believe that the way he teaches is the proper way a university course should be taught. However, the pace of this class is, in my opinion, too fast compared to the rate I'm used to learning at.*

*The best way to describe Dr. Clarke is the Saint Mary's version of Neil DeGrasse-Tyson. You come into his courses knowing little about the subject matter and leave an expert.*

*Very vibrant lecturing style, as always, office hours extremely helpful, and very carefully prepared material. Yeah, your courses are hard and the very difficult weekly assignments a huge workload, but I'm learning a lot quickly so I suppose I can't complain.*

*The professor is very passionate and knows his subject.*

*Dr. Clarke is highly organised and well-prepared, and he has a clear and thorough understanding of the material, which is contagious. He is also warm and kind and very easy to go ask help from.*

*The instructor has a high level of interest in the subject matter and is very friendly and approachable.*

*His availability outside of class is always extremely helpful.*

*Beyond pretty much anyone else, he is incredibly kind, helpful and supportive in office hours! On-line supplementary material is also incredibly helpful.*

*Dr. Clarke was quite enthusiastic about teaching this course. Having such an experienced and full-of-knowledge prof has been a great learning experience.*

*Phenomenal lectures, as always!*

*Very enthusiastic about the topics; office hours were very useful.*

*He is good at explaining and he provides notes which are helpful for assignments and reading.*

*Notes are easy to take and understand and demonstrated with examples.*

*Clarke's enthusiasm and passion for learning is always refreshing and his ability to very carefully and clearly explain topics is crucial to student's ability to understand course material.*

*Very clear and thorough during lecture. Very good with consistent notation.*

*Very caring towards students and how they are doing in the course; cares if we succeed.*

## Mathematical Methods in Physics II

PHY 436 (until winter, 2006)

term	#	Q10	Q11	Q12	Q13	Q14	Q15	<b>Q16</b>	Q17	Q18	Q19	Q20	<b>Q21</b>
W95	2	4.0	4.0	4.0	4.5	4.5	5.0	<b>5.0</b>	4.5	4.0	5.0	4.5	<b>4.5</b>
W97	3	5.0	4.3	4.7	3.7	3.7	4.7	<b>4.7</b>	4.7	4.0	3.7	4.3	<b>4.3</b>
W98	5	3.8	4.0	4.2	2.8	2.8	4.2	<b>3.2</b>	4.6	4.2	4.4	4.3	<b>3.6</b>
W99	10	3.5	3.8	4.1	3.1	2.7	4.1	<b>3.4</b>	3.6	3.4	3.4	2.8	<b>2.8</b>

### Selected comments

*The course forces your math skills to increase; the textbook is great.*

*Dr. Clarke is always available for extra help.*

*I like how the course followed the book so if I missed something in class, I could pick it up on my own later.*

*Great course, great prof.*

*Tutorials are very useful!*

*Tutorials are well appreciated and very useful.*

*The course is beneficial, but it is too much at once. It feels like trying to jam a math degree into one credit!*

*The book isn't very well suited for trying to learn a course.*

*Why should I even bother?<sup>8</sup>*

PHYS 3201 (from fall, 2006)

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	<b>Q30</b>	<b>Q31</b>
W18	6	4.6	4.8	4.7	4.8	4.9	4.0	4.5	4.8	<b>4.8</b>	<b>4.8</b>
W19	5	4.3	4.8	4.5	3.8	4.5	4.1	4.3	4.1	<b>4.2</b>	<b>4.6</b>
W20	3	4.4	5.0	4.7	4.7	4.7	4.7	4.8	4.7	<b>4.3</b>	<b>5.0</b>

### Selected comments

*Very well-planned classes, enthusiasm, and high standards.*

*Less assignments was more manageable; having notes available was very helpful; midterm structure made it less stressful.<sup>9</sup>*

<sup>8</sup>Sadly, an apparently very discouraged student.

<sup>9</sup>When I resumed teaching this course after a hiatus of almost 20 years and after reviewing student comments from my previous stint, I introduced a “smorgasbord-style” midterm in which a perfect paper would be any 40 points of the 60 available; an attempt to examine students on what they know rather than what they don't. Most seemed to prefer it and I have adopted it in several other of my courses as a result.

*Love the lecture format as always! The midterm format was also fantastic.*

*Extremely clear explanations which are engaging and interesting; some very cool topics and materials. Amazing office hours, very helpful!*

*Availability outside class is excellent.*

## Computational Methods in Physics

PHY 437 (until winter, 2006)

term	#	Q10	Q11	Q12	Q13	Q14	Q15	<b>Q16</b>	Q17	Q18	Q19	Q20	<b>Q21</b>
W04	4	4.3	4.3	4.5	4.8	3.8	5.0	<b>4.0</b>	5.0	3.0	3.8	4.3	<b>3.3</b>

### Selected comments

*Many useful programs were developed. It would have been nice to have an extra assignment or two instead of a project; it became overwhelming at times.*

*Very useful and handy material! However, there's enough material and assignments for two semesters! Assignments are massive in scope and the addition of a project is overwhelming.*

PHYS 3210 (from fall, 2006)

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	<b>Q30</b>	<b>Q31</b>
W12	5	4.6	4.6	4.1	3.9	4.3	4.0	3.6	4.0	<b>4.2</b>	<b>4.6</b>
W13	8	4.6	4.9	4.8	4.6	4.7	4.4	4.1	4.4	<b>4.8</b>	<b>5.0</b>
W14	3	4.5	4.9	4.7	4.3	4.7	4.4	4.2	4.5	<b>4.3</b>	<b>4.0</b>
W16	6	3.4	4.1	3.6	4.0	4.1	4.7	3.9	3.9	<b>3.2</b>	<b>3.4</b>
W17	6	4.1	4.7	4.6	4.4	4.5	4.2	4.0	4.1	<b>4.2</b>	<b>4.7</b>

### Selected comments

*Extremely great helper!!*

*This course really makes you learn how to program.*

*Availability during all hours of the day has been very helpful. Links and files on the website were also very convenient.*

*This is an excellent course, but the workload is just too much.*

*Very enthusiastic, which is great. Thanks for always helping even outside of office hours.*

*Enthusiastic, helpful, available outside of class.*

*Clarke rocks!*

*I was very interested in the topic prior to taking this class, but this experience has turned me away from computational physics. The course does not start with the basics, which makes it very difficult to learn.*

*Always fair and, of course, the explanations are just top notch.*

*I wish more of the assignments were like the first two, shorter, easier programs that we write ourselves from scratch, rather than huge tasks that are already 90% completed for us.<sup>10</sup>*

## Thermal Physics

### PHYS 3350

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	Q30	Q31
W16	11	4.2	4.9	4.6	4.7	4.6	4.4	4.5	4.2	4.2	4.5
W18	9	4.3	4.8	4.8	4.6	4.7	4.5	4.3	4.2	4.7	5.0
W20	6	4.2	4.5	4.4	3.7	4.2	4.1	4.0	4.1	4.0	4.2

### Selected comments

*The most kind and approachable prof. at SMU. Being able to go to his office at any time, ask any question was extremely valuable.*

*Lessons were really in-depth, really felt like I learned a lot. Assignments due bi-weekly was great.*

*All of Dr. Clarke's lectures are well-structured, and seem well-planned in advance. His descriptions of important concepts in thermodynamics were clear and to the point.*

*He gives good explanations and is even willing to ask the class about gaps in his knowledge.*

*Well-prepared notes and materials, good lecture style.*

*Professor Clarke does give individual attention when needed and he does want his students to do well. The class is challenging but you can do well if you go to office hours and to classes.*

*Very experienced and passionate about his work. Holds himself and students to high standards.*

*The quality of his instruction is very high.*

*As always, Dr. Clarke goes above and beyond. It's no wonder why people show up to all of his classes and not others...*

*Dr. Clarke should keep teaching the same way he always does. People learn things in his class, a hard thing to come by these days.*

*Hire some more profs in the department like Dr. Clarke to teach some more courses. Quality of life will improve. Ask anyone.*

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<sup>10</sup>This comes under the category of "You can't win!". In an attempt to heed previous critiques that the assignments were too onerous, I redesigned some of them to include key subroutines pre-programmed to lessen their load (though certainly not by 90%)!

## Quantum Mechanics I

PHY 471, 425 (until winter, 2006)

term	#	Q10	Q11	Q12	Q13	Q14	Q15	<b>Q16</b>	Q17	Q18	Q19	Q20	<b>Q21</b>
W94	4	5.0	4.3	5.0	4.7	5.0	5.0	<b>5.0</b>	4.7	4.7	4.7	5.0	<b>4.7</b>
W96	4	4.5	3.8	4.5	4.3	4.5	4.5	<b>4.3</b>	4.3	4.8	3.8	5.0	<b>5.0</b>
W97	5	4.8	4.4	4.6	4.2	4.2	4.8	<b>4.6</b>	4.2	4.6	4.4	3.6	<b>4.4</b>

### Selected comments

*The course is very interesting and very useful in understanding just about every other course in physics that I took.*

*The professor is very good, book is pretty clear, course is well laid out.*

*Interesting material put forward in such a way as to keep my interest in the course.*

*Really cool! I love quantum!*

*The textbook was an excellent resource. It was very well written and easy to read.*

*Very interesting course. But add more stuff that can't/shouldn't happen, i.e., black holes, time travel, parallel universes. Makes it that more interesting!<sup>11</sup>*

*Exceptional course and prof.*

*I think you assign good questions, and I like the fact you give questions in class for students to work on their own.*

*Very structured, complete coverage of the topic, followed the text well.*

PHYS 3500 (from fall, 2006)

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	<b>Q30</b>	<b>Q31</b>
W12	7	4.4	4.7	4.4	4.2	4.3	4.6	4.5	4.5	<b>4.3</b>	<b>4.4</b>
W16	10	4.4	4.8	4.7	4.3	4.4	4.5	4.4	4.3	<b>4.2</b>	<b>4.3</b>

### Selected comments

*Dr. Clarke is very enthusiastic and welcoming for any questions the students had.*

*“Square Tables” were great; it was nice to step out of a lecture for a day or two to discuss some of the implications of the theory we were learning.<sup>12</sup>*

<sup>11</sup>And so see the following footnote on “square tables”, introduced after a 15-year hiatus from this course.

<sup>12</sup>In winter 2012, I introduced what I called “square tables” (since there were no *round* tables available) where, as at Camelot, everyone at the table—including me—was an equal in discussing a topic students did a little research on beforehand (*e.g.*, *Bell’s Theorem*, *Dirac’s equation*, and *Many-world interpretation*). Here we could explore some of the most mind-bending implications of quantum theory in a more “relaxed” and “curiosity-driven” environment than formal lectures.

*Dr. Clarke was certainly enthusiastic about teaching this course, and my interest in quantum mechanics increased because of this class. I highly enjoyed the “square table” discussions as it gave us a break from the math and focused on the theory and philosophy; a different approach from other physics courses.*

*Assignments are always helpful, despite how daunting they seem at first.*

*Dr. Clarke is very knowledgable and always eager to help. The “square tables” were a great idea, but the material is sometimes over an undergraduate’s level.*

*Professor Clarke has been friendly, knowledgeable and extremely helpful outside and in class. “Square tables” were a great learning experience. He is doing great!”*

*I really enjoyed the way the notes were presented and they were really helpful with the learning of the material.*

*I liked the “square tables”. The math in this course was kind of overwhelming, so looking at theories qualitatively was a nice break.*

## Fluid Dynamics

### PHYS 4380

term	#	Q1-4	Q5-8	Q9-12	Q13-15	Q16-19	Q20-23	Q24-27	Q28-29	Q30	Q31
F08	3	4.4	5.0	4.8	5.0	4.7	4.4	4.6	4.8	<b>4.7</b>	<b>5.0</b>
W17	5	4.6	4.7	4.6	4.5	4.5	4.6	4.5	4.7	<b>5.0</b>	<b>4.8</b>

### Selected comments

*Dr. Clarke is exceptional in that he is very available and approachable for help. This made a course with a heavy workload manageable.*

*Very well prepared lecture notes and good assignments that support learning the subject.*

*Knew the field inside out.*

*The instructor was knowledgeable and engaged in the material and made the class and lecture a lot more enjoyable.*

*Explanations are top notch as always!*

## Gas Dynamics

### AST 613

term	#	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
W95	7	4.6	4.1	4.4	4.4	4.1	4.6	<b>4.4</b>	4.1	4.1	4.4	4.3	<b>4.1</b>
F97	2	5.0	5.0	5.0	5.0	5.0	5.0	<b>5.0</b>	5.0	5.0	4.5	5.0	<b>5.0</b>

## Selection criteria for student comments

Obviously, I can lift any comments I like, and leave out the ones I don't and, to some extent, I have done just that. Those who read all the comments in any particular course will find the odd negative one, many of which come in one of four favours I list below. I can truthfully say that the positive comments outnumber the *considered* negative comments by ten-to-one and, for anyone who would care to check, I have retained the paper copies of the CEF and ICE forms.

Many of the positive comments are repetitive, and I have probably left out half of these on this criterion. Of the negative comments, about half are unconstructive “flames” (This prof sucks!!!) which aren't particularly helpful, while most of the other half come in four flavours:

1. *Slow down! There's way too much in this course and the prof expects way too much of us!*

to which I respond: “My courses contain no more and no less than what is required for the student to move on to the next level on the student's chosen path where they graduate as a competent physicist by the end of their fourth year. And yes, I do expect a lot. That's my job.”

2. *Assignments have little to do with course material, and exams have little to do with assignments.*

to which I respond: “In fact, my class examples are meticulously designed to feed into the practise problems (whose solutions I give with the assignments) which feed into the assignment problems which ultimately feed into the exam problems. Sadly, students not recognising this may have missed the main points of the course.”

3. *It's unfair that the assignments are worth so little (typically 20–25%) and the exams so much [midterm(s) + final typically 75–80%].*

to which I respond: “I have no satisfactory answer to this. I agree, it's harsh that the final exam could be worth 60% or more of the course, and a bad three hours could ruin what might otherwise have been a good grade. My reason for making assignments worth as little as I do is their solutions can all be found on-line, and I don't give students As based on how well they can find and copy other people's solutions. To compensate, I give practise final exams with solutions similarish to the actual final, I give plenty of choice on the exams so that blanking out in one area is not fatal, and I have—as pointed out in numerous student comments—virtually endless office hours as needed.

Still, 60% for the final exam can be brutal and I wish I had a better answer.”

4. *Stop blocking the board!!*

to which I respond: “Sorry, I'm a big guy and I try my best, but when the board stretches across the front of the room, unless I squat down under the pen rack while talking, I'm always going to be blocking *some* part of the board for *some* students!”

Lastly, most of the constructive negative comments that don't fall into these categories are among the “selected comments” and, for the most part, have lead me to modify my courses and/or teaching style to accommodate. Some of these modifications are described in the document footnotes.

D. Clarke, January 2022.