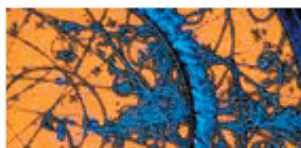


# Physics and Astronomy Student Union



## Introduction

The Physics & Astronomy Students' Union (PASU) represents all undergraduate students enrolled in PHY and AST courses. To find out more about PASU, drop by their office at MP 217 or call them at 416-978-6740.

Editor

## AST 101H1F The Sun and Its Neighbour

Instructor(s): M. van Kerkwijk; R. Jayawardhana

Enr: 943      Resp: 151      Retake: 76%

	1	2	3	4	5	6	7	Mean
<u>van Kerkwijk:</u>								
Presents	0	0	4	12	33	29	20	5.5
Explains	0	0	6	19	32	28	12	5.2
Communicates	0	0	4	6	19	29	39	5.9
Teaching	0	0	2	10	27	44	14	5.6
<u>Jayawardhana:</u>								
Presents	0	0	4	9	25	39	20	5.6
Explains	0	0	4	13	37	30	12	5.3
Communicates	0	0	3	8	21	32	32	5.8
Teaching	0	0	4	8	28	43	15	5.6
<u>Course:</u>								
Workload	1	6	9	62	13	6	0	4.0
Difficulty	0	4	10	58	15	6	2	4.1
Learn Exp	0	0	5	37	28	17	9	4.8

Students enjoyed this course. The quizzes were helpful and both Van Kerkwijk and Jayawardhana were interesting and enthusiastic. Movies and visual aids were extremely helpful; and the slides were well done. The website was also helpful.

## AST 121H1S Origin and Evolution of the Universe

Instructor(s): H. Yee

Enr: 92      Resp: 33      Retake: 78%

	1	2	3	4	5	6	7	Mean
Presents	0	0	3	18	36	33	9	5.3
Explains	0	6	6	42	15	24	6	4.6
Communicates	0	0	0	21	39	27	12	5.3
Teaching	0	0	3	21	33	36	3	5.1
Workload	3	9	15	57	12	0	3	3.8
Difficulty	0	9	15	45	27	3	0	4.0
Learn Exp	3	7	7	42	14	21	3	4.4

Most students enjoyed the course material. Yee made the material interesting through his enthusiasm and his deep understanding of the subject. The help sessions and office hours were very useful however, the text was inadequate.

## AST 201H1S Stars and Galaxies

Instructor(s): M. van Kerkwijk; R. Jayawardhana

Enr: 911      Resp: 107      Retake: 65%

	1	2	3	4	5	6	7	Mean
<u>van Kerkwijk:</u>								
Presents	0	0	4	17	32	32	14	5.4
Explains	0	0	3	21	45	19	12	5.2
Communicates	0	0	1	9	32	31	27	5.7
Teaching	0	1	2	17	41	25	12	5.3
Workload	1	3	11	60	12	6	2	4.1
Difficulty	0	5	5	50	25	9	2	4.4
Learn Exp	0	4	3	46	23	13	8	4.6

This was an interesting, entertaining and thought provoking class with good use of pictures, music and animations. A few students felt that there was too much math for a course with no math pre-requisite.

## AST 210H1F Great Moments in Astronomy

Instructor(s): C. Clement

Enr: 192      Resp: 71      Retake: 74%

	1	2	3	4	5	6	7	Mean
Presents	2	0	2	13	31	26	23	5.4
Explains	1	0	2	14	40	24	17	5.3
Communicates	1	0	4	8	30	26	28	5.6
Teaching	1	1	1	13	13	44	23	5.7
Workload	2	2	24	53	13	1	1	3.8
Difficulty	1	2	27	52	10	2	1	3.8
Learn Exp	1	0	5	30	22	26	13	5.0

Most students thought that this was a good course with a good instructor. A few felt that the course could have been better organized.

## AST 210H1S Great Moments in Astronomy

Instructor(s): W.H. Clark

Enr: 188      Resp: 80      Retake: 90%

	1	2	3	4	5	6	7	Mean
Presents	0	2	3	17	23	29	23	5.4
Explains	0	0	2	11	26	39	19	5.6
Communicates	0	0	1	7	31	36	23	5.7
Teaching	0	0	0	12	27	44	15	5.6
Workload	5	9	15	59	7	2	0	3.6
Difficulty	3	5	28	48	7	3	1	3.7
Learn Exp	0	0	1	36	35	18	8	4.9

Clark was a good instructor. This class was both interesting and enjoyable for most students. Some felt that the website should have been updated and expanded.

## AST 221H1F Solar System and Stellar Astronomy

Instructor(s): Y. Wu

Enr: 37      Resp: 27      Retake: 96%

	1	2	3	4	5	6	7	Mean
Presents	0	0	0	18	29	44	7	5.4
Explains	0	0	11	22	44	18	3	4.8
Communicates	0	0	0	33	33	37	25	5.9
Teaching	0	0	3	3	30	46	15	5.7
Workload	0	0	3	48	40	7	0	4.5
Difficulty	0	0	7	22	33	33	3	5.0
Learn Exp	0	0	0	15	50	20	15	5.3

Most students found this course interesting but challenging. Many found that the problem sets were difficult and not good preparation for the tests.

**AST 222H1S Galactic and Extragalactic Astronomy**

Instructor(s): J. Dubinski

Enr: 20	Resp: 9							Retake: 66%
	1	2	3	4	5	6	7	Mean
Presents	0	11	22	33	22	11	0	4.0
Explains	0	12	37	25	25	0	0	3.6
Communicates	0	11	11	22	22	22	11	4.7
Teaching	0	11	11	22	33	22	0	4.4
Workload	0	0	0	55	33	11	0	4.6
Difficulty	0	0	0	33	44	22	0	4.9
Learn Exp	0	12	25	12	37	12	0	4.1

**AST 251H1F Life on Other Worlds**

Instructor(s): C. Matzner

Enr: 137	Resp: 92							Retake: 81%
	1	2	3	4	5	6	7	Mean
Presents	0	2	2	16	29	36	13	5.4
Explains	0	0	2	12	35	39	10	5.5
Communicates	0	0	1	5	14	42	36	6.1
Teaching	0	0	0	4	36	45	14	5.7
Workload	0	6	20	64	8	0	0	3.8
Difficulty	0	4	11	72	9	2	0	3.9
Learn Exp	0	0	3	32	31	22	10	5.0

Students found the course to be very interesting and Matzner to be a good instructor who was humorous and kind. The major complaint was that there was no break in the middle of the two hour lecture.

**AST 251H1S Life on Other Worlds**

Instructor(s): C. Matzner

Enr: 144	Resp: 90							Retake: 72%
	1	2	3	4	5	6	7	Mean
Presents	0	1	7	24	25	28	12	5.1
Explains	0	3	9	18	26	27	15	5.1
Communicates	0	1	3	10	20	33	32	5.8
Teaching	0	1	2	13	32	35	14	5.4
Workload	1	5	21	61	7	2	0	3.8
Difficulty	1	1	17	62	12	4	1	4.0
Learn Exp	0	4	2	39	27	14	10	4.8

Students felt this course was interesting due to Matzner's enthusiasm toward the broad range of topics covered. Some felt that although the slides were well-organized, they should have been posted online earlier. Students felt that the midterm did not reflect the material covered.

**AST 320H1S Introduction to Astrophysics**

Instructor(s): M. van Kerkwijk

Enr: 20	Resp: 15							Retake: 80%
	1	2	3	4	5	6	7	Mean
Presents	0	0	6	26	40	6	20	5.1
Explains	0	0	0	20	40	33	6	5.3
Communicates	0	0	0	0	0	53	46	6.5
Teaching	0	0	0	0	35	35	28	5.9
Workload	0	0	0	13	46	33	6	5.3
Difficulty	0	0	0	40	40	13	6	4.9
Learn Exp	0	0	0	25	33	8	33	5.5

van Kerkwijk was enthusiastic and knowledgeable about the material. Most comments said that the mini problem sets were very helpful but they took a little too long to have 2 due each week. Also, more clarity about the expectations for the presentations would have been helpful.

**AST 326Y1Y Practical Astronomy**

Instructor(s): S. Mochnacki

Enr: 10	Resp: 5							Retake: 75%
	1	2	3	4	5	6	7	Mean
Presents	0	40	20	20	20	0	0	3.2

Explains	0	0	20	40	40	0	0	4.2
Communicates	0	0	0	0	20	60	20	6.0
Teaching	0	0	0	20	60	20	0	5.0
Workload	0	0	0	0	0	20	80	6.8
Difficulty	0	0	40	40	0	0	20	4.2
Learn Exp	0	0	0	0	50	25	25	5.8

Students enjoyed the observing and found Mochnacki helpful and approachable. Too much time was needed for the observing and the report was difficult.

**PHY 100H1F The Magic of Physics**

Instructor(s): A. Steinberg

Enr: 144	Resp: 51							Retake: 48%
	1	2	3	4	5	6	7	Mean
Presents	0	6	12	16	28	24	14	4.9
Explains	0	6	12	22	22	26	10	4.8
Communicates	0	2	2	16	22	26	32	5.6
Teaching	0	0	11	23	17	35	11	5.1
Workload	0	0	8	46	24	8	14	4.7
Difficulty	2	2	2	32	30	20	10	4.9
Learn Exp	0	2	5	27	10	35	18	5.3

Most students felt that overall, Steinberg was an effective lecturer. However, many complaints were voiced about the structure of the course. Tutorials were not effective since the material did not match the lectures. Some also said that the material was far too difficult for non-science students and that the course had too many readings and assignments.

**PHY 110Y1Y Basic Physics**

Instructor(s): N. Krasnopolskaia; D. James

Enr: 154	Resp: 42							Retake: 57%
	1	2	3	4	5	6	7	Mean
<u>Krasnopolskaia:</u>								
Presents	0	0	2	9	24	31	31	5.8
Explains	0	0	11	11	30	26	19	5.3
Communicates	0	0	7	23	19	35	14	5.3
Teaching	0	2	7	9	26	40	14	5.4
<u>James:</u>								
Presents	0	0	0	7	29	46	17	5.7
Explains	0	0	0	9	21	47	21	5.8
Communicates	0	0	0	0	14	40	45	6.3
Teaching	0	0	0	2	23	45	28	6.0
<u>Course:</u>								
Workload	4	2	21	54	11	0	4	3.9
Difficulty	2	2	14	54	14	2	9	4.2
Learn Exp	2	8	8	41	22	11	5	4.3

This course was well-liked with a good balance between theory and application. Most thought the test was unfair due to the too many multiple choice questions. Krasnopolskaia was enthusiastic, showed great slides and showed genuine concern for the students.

Most thought James was a good instructor who was easy to understand.

Instructor(s): R. Logan

Enr: 153	Resp: 50							Retake: 48%
	1	2	3	4	5	6	7	Mean
Presents	10	10	18	34	16	2	10	3.8
Explains	6	14	26	20	20	6	6	3.8
Communicates	2	0	2	8	12	34	42	6.0
Teaching	4	4	4	22	26	22	18	5.0
Workload	4	6	10	62	12	4	2	3.9
Difficulty	6	6	12	50	12	10	4	4.0
Learn Exp	4	4	11	44	13	16	4	4.3

Some students felt that Logan was an enthusiastic instructor. There were concerns however, that his notes were not organized and that more examples could have been used.

## 190 PHYSICS & ASTRONOMY

Instructor(s): R. Logan

	Resp: 60							Retake: 38%
	1	2	3	4	5	6	7	
	Mean							
Presents	10	6	16	23	33	8	1	4.0
Explains	10	3	15	25	26	13	6	4.2
Communicates	1	1	1	3	21	28	41	5.9
Teaching	3	8	10	15	16	28	18	4.9
Workload	0	1	13	75	6	3	0	4.0
Difficulty	0	0	6	68	13	5	6	4.4
Learn Exp	4	10	8	36	30	4	8	4.2

Students felt that Logan was enthusiastic and had a great sense of humour. Many felt he was somewhat disorganized, went too fast and sometimes did not answer questions in a clear manner.

Instructor(s): N. Krasnopolaskaia; D. James

	Resp: 31							Retake: 39%
	1	2	3	4	5	6	7	
	Mean							
<u>Krasnopolaskaia:</u>								
Presents	0	0	3	3	3	26	63	6.4
Explains	0	3	0	3	10	50	33	6.0
Communicates	0	0	3	13	23	23	36	5.8
Teaching	0	3	6	0	20	40	30	5.8
<u>James:</u>								
Presents	0	3	3	6	23	43	20	5.6
Explains	0	0	0	6	20	43	30	6.0
Communicates	0	0	0	0	3	43	53	6.5
Teaching	0	0	3	0	13	50	33	6.1
<u>Course:</u>								
Workload	0	0	6	68	10	10	3	4.3
Difficulty	0	0	10	63	10	13	3	4.4
Learn Exp	0	0	8	43	26	17	4	4.7

This course was well-liked except for the lab component which was felt to have had little to do with the course material.

Krasnopolaskaia was well-organized with great slides. She was also able to answer questions with patience and give excellent helpful responses.

James was engaging, enthusiastic and made physics fun.

### PHY 138Y1Y Physics for the Life Sciences I

Instructor(s): J. Harlow

	Resp: 448							Retake: 29%
	1	2	3	4	5	6	7	
	Mean							
Presents	0	0	1	8	25	39	24	5.7
Explains	0	0	1	9	27	39	21	5.6
Communicates	0	0	0	2	13	31	50	6.2
Teaching	0	0	1	6	23	38	28	5.8
Workload	0	0	1	18	26	30	22	5.5
Difficulty	0	0	0	12	25	35	25	5.7
Learn Exp	5	5	10	40	20	14	4	4.3

Students felt that Harlow was enthusiastic. The demonstrations were enjoyed by most students. Many students complained that the tests were not related to lectures. Also, there were concerns that the class was much too large.

Instructor(s): A. Key; K. Strong

	Resp: 277							Retake: 26%
	1	2	3	4	5	6	7	
	Mean							
<u>Key:</u>								
Presents	1	1	6	18	29	31	10	5.1
Explains	0	1	3	17	30	33	12	5.3
Communicates	0	0	1	5	22	40	28	5.8
Teaching	1	1	2	13	28	33	19	5.4
<u>Strong:</u>								
Presents	3	2	13	25	32	19	1	4.5
Explains	3	4	11	31	28	16	3	4.4

Communicates	3	2	5	22	35	24	7	4.8
Teaching	3	2	10	25	32	20	4	4.6
Workload	0	0	0	16	34	26	21	5.5
Difficulty	0	0	0	9	27	27	34	5.9
Learn Exp	5	5	15	43	17	10	3	4.1

Most comments dealt with Key's supplementary notes that were over-all better than the text, but could have been improved by separating the formulas. Students thought Key was funny but felt he was too harsh on late students.

Most students felt that Strong was a good instructor but felt that she needed to talk slower and be a little more assertive.

Students felt that the examples were helpful but there were not enough of them. The tests were too challenging for some but others liked the challenge.

### PHY 140Y1Y Foundations of Physics

Instructor(s): M. Luke

	Resp: 45							Retake: 78%
	1	2	3	4	5	6	7	
	Mean							
Presents	0	0	0	2	16	51	30	6.1
Explains	0	0	0	2	9	48	39	6.3
Communicates	0	0	0	0	11	34	56	6.4
Teaching	0	0	0	2	16	55	25	6.0
Workload	2	2	0	27	40	22	4	4.9
Difficulty	2	2	0	30	23	27	13	5.1
Learn Exp	2	0	2	21	35	29	8	5.1

Students really liked Luke. He was interesting, enthusiastic and explained concepts very well. In class demonstrations were helpful.

### PHY 205H1F The Physics of Everyday Life

Instructor(s): J. Harlow

	Resp: 50							Retake: 89%
	1	2	3	4	5	6	7	
	Mean							
Presents	0	0	2	8	14	38	36	6.0
Explains	2	2	0	6	18	32	38	5.9
Communicates	0	0	0	6	6	12	75	6.6
Teaching	0	2	4	2	6	48	36	6.1
Workload	2	2	16	48	20	8	2	4.2
Difficulty	0	4	29	47	6	10	2	4.0
Learn Exp	7	0	2	15	21	26	26	5.3

Students described Harlow as organized, energetic, helpful, passionate and enthusiastic. Students liked the demos and found the material interesting.

### PHY 238Y1Y Physics for the Life Sciences II

Instructor(s): R. Serbanescu; P. Kushner

	Resp: 22							Retake: 71%
	1	2	3	4	5	6	7	
	Mean							
<u>Serbanescu:</u>								
Presents	0	0	4	9	14	42	28	5.8
Explains	0	0	0	9	19	38	33	6.0
Communicates	0	0	4	4	23	38	28	5.8
Teaching	0	0	0	9	4	47	38	6.1
<u>Kushner:</u>								
Presents	4	4	9	40	9	22	9	4.5
Explains	9	0	13	27	31	9	9	4.4
Communicates	4	0	13	22	9	36	13	5.0
Teaching	4	4	9	18	40	13	9	4.6
<u>Course:</u>								
Workload	4	0	9	27	36	4	18	4.8
Difficulty	4	0	0	45	18	13	18	4.9
Learn Exp	0	0	6	50	18	6	18	4.8

This course was well-liked overall. The text was very useful. Serbanescu was liked by most students. She provided excellent notes, good examples and was caring towards her students.

A few students thought Kushner did not always attend to students' needs.

### PHY 251H1S Electricity and Magnetism

Instructor(s): P. Krieger

	Resp: 31							Retake: 70%
	1	2	3	4	5	6	7	
Presents	0	3	9	12	22	32	19	5.3
Explains	3	6	9	22	16	22	19	4.9
Communicates	6	6	22	16	25	16	6	4.2
Teaching	3	3	3	25	35	16	12	4.9
Workload	0	0	6	58	32	3	0	4.3
Difficulty	0	3	16	51	22	6	0	4.1
Learn Exp	0	6	3	50	20	16	3	4.5

Students thought the course was well-organized and that Krieger was friendly and approachable. Students felt that the course followed the text too closely and that Krieger should have used more examples.

### PHY 252H1S Thermal Physics

Instructor(s): E. Poppitz

	Resp: 44							Retake: 59%
	1	2	3	4	5	6	7	
Presents	2	6	4	20	34	20	9	4.8
Explains	2	2	11	25	30	23	4	4.7
Communicates	2	0	2	6	18	39	30	5.8
Teaching	2	0	4	11	40	29	11	5.2
Workload	0	0	4	36	25	25	9	5.0
Difficulty	0	0	0	14	35	30	19	5.5
Learn Exp	0	2	2	42	30	12	10	4.8

Poppitz, through his enthusiasm, was able to make a difficult course interesting. Students felt that he does, however, need to use more examples and that the test was very difficult.

### PHY 255H1F Oscillations and Waves

Instructor(s): R. Marjoribanks

	Resp: 35							Retake: 65%
	1	2	3	4	5	6	7	
Presents	0	5	5	25	17	34	11	5.0
Explains	2	0	5	17	31	22	20	5.2
Communicates	0	2	0	17	25	34	20	5.5
Teaching	2	2	11	22	37	20	2	4.6
Workload	0	2	0	65	20	8	2	4.4
Difficulty	0	0	8	51	22	8	8	4.6
Learn Exp	6	0	3	43	23	16	6	4.5

Marjoribanks gave useful examples and demonstrations in class. However, most students found it difficult to get help outside of class and said that the tests were not returned before the drop date.

### PHY 305H1F Electronics Lab I

Instructor(s): B. Milkereit

	Resp: 13							Retake: 84%
	1	2	3	4	5	6	7	
Presents	0	7	7	53	23	0	7	4.2
Explains	0	0	15	46	30	7	0	4.3
Communicates	0	7	7	23	23	38	0	4.8
Teaching	0	0	7	7	46	23	15	5.3
Workload	0	0	15	7	15	30	30	5.5
Difficulty	0	15	0	46	23	15	0	4.2
Learn Exp	0	0	0	25	25	33	16	5.4

Students felt that the labs were too long and prior knowledge of electronics would have been useful. Some students felt the experiment handouts needed to be updated. Many said it was an important course to take.

### PHY 307H1F Introduction to Computational Physics

Instructor(s): B. Holdom

	Resp: 31							Retake: 88%
	1	2	3	4	5	6	7	
Presents	0	0	7	17	25	21	28	5.5
Explains	0	3	7	14	35	28	10	5.1
Communicates	0	3	7	17	39	21	10	5.0
Teaching	0	0	0	21	21	35	21	5.6
Workload	7	7	40	37	7	0	0	3.3
Difficulty	3	0	14	55	14	11	0	4.1
Learn Exp	0	0	0	19	23	28	28	5.7

Students felt the course was very valuable. Holdom was very nice, approachable and easy to talk to, however, a few felt his lectures were monotone. Students also felt the TAs of the course were very unhelpful, and had different expectations than the instructor.

### PHY 308H1S Times Series Analysis

Instructor(s): R. Bailey

	Resp: 16							Retake: 64%
	1	2	3	4	5	6	7	
Presents	6	6	6	25	37	6	12	4.5
Explains	0	12	0	18	37	25	6	4.8
Communicates	0	0	0	12	37	31	18	5.6
Teaching	0	12	6	0	43	31	6	4.9
Workload	0	0	6	26	60	6	0	4.7
Difficulty	0	0	6	43	50	0	0	4.4
Learn Exp	0	23	7	23	23	15	7	4.2

Students found Bailey engaging, interesting and overall an effective instructor. There were concerns, however, that material was not graded quick enough and that it was difficult to sort out what material was most important for the tests.

### PHY 309H1S Quantum Methods Using Computer Algebra

Instructor(s): P. Savaria

	Resp: 8							Retake: 62%
	1	2	3	4	5	6	7	
Presents	0	0	0	37	37	12	12	5.0
Explains	0	0	25	50	25	0	0	4.0
Communicates	0	0	0	42	42	14	0	4.7
Teaching	0	0	0	14	28	57	0	5.4
Workload	0	0	0	12	50	37	0	5.2
Difficulty	0	0	0	37	50	12	0	4.8
Learn Exp	0	0	20	0	40	20	20	5.2

Students generally enjoyed this course. They felt that it aided in their understanding of Quantum Mechanics by linking it with computational computing. Some felt that the assignments were too difficult to be assigned every week.

### PHY 346H1S Intermediate Biophysics

Instructor(s): R. Serbanescu

	Resp: 16							Retake: 58%
	1	2	3	4	5	6	7	
Presents	0	0	0	13	33	33	20	5.6
Explains	0	0	0	18	43	12	25	5.4
Communicates	0	0	0	0	25	43	31	6.1
Teaching	0	0	0	12	25	18	43	5.9
Workload	0	0	12	56	31	0	0	4.2
Difficulty	0	6	6	43	31	12	0	4.4
Learn Exp	0	0	7	23	38	23	7	5.0

Most students thought that Serbanescu was a good lecturer who was friendly and approachable. Students did however, feel that the assignments were not marked quick enough. Also, this course was felt to be too broad and would have been benefitted from a narrower focus.

## 192 PHYSICS & ASTRONOMY

### PHY 351H1S Classical Mechanics

Instructor(s): P. Kushner

Enr: 94	Resp: 53							Retake: 48%
	1	2	3	4	5	6	7	Mean
Presents	3	5	3	13	44	23	5	4.8
Explains	3	9	7	25	32	17	3	4.4
Communicates	0	3	3	15	39	29	7	5.1
Teaching	5	0	9	19	41	15	7	4.7
Workload	0	0	0	33	27	23	15	5.2
Difficulty	0	0	5	15	21	43	13	5.4
Learn Exp	4	6	4	25	27	23	6	4.6

Most students felt that Kushner was a good lecturer but sometimes moved a little slowly. The course also could have used a better text and the tutorials were useless.

### PHY 353H1S Electromagnetic Waves

Instructor(s): D. Jones

Enr: 39	Resp: 27							Retake: 73%
	1	2	3	4	5	6	7	Mean
Presents	0	0	3	7	14	48	25	5.9
Explains	0	0	11	3	11	55	18	5.7
Communicates	0	0	3	3	26	42	23	5.8
Teaching	0	0	0	11	11	61	15	5.8
Workload	3	0	3	40	25	25	0	4.6
Difficulty	3	0	3	23	38	30	0	4.8
Learn Exp	0	0	0	10	47	36	5	5.4

Jones was enthusiastic and students enjoyed his class. Students liked how he associated the material with applied problems.

### PHY 355H1F Quantum Mechanics I

Instructor(s): J. Sipe

Enr: 112	Resp: 70							Retake: 79%
	1	2	3	4	5	6	7	Mean
Presents	0	0	2	5	13	42	36	6.0
Explains	0	0	4	10	15	37	32	5.8
Communicates	0	0	0	0	8	12	78	6.7
Teaching	0	0	0	0	11	30	57	6.5
Workload	0	0	5	23	29	27	13	5.2
Difficulty	0	0	0	10	17	40	31	5.9
Learn Exp	1	0	3	5	25	33	29	5.7

Students felt Sipe was an incredible lecturer. He was very enthusiastic and passionate about the subject material which made for a superior learning experience. Most students felt, however, that the quizzes were too long and very difficult.

### PHY 357H1S Nuclear and Particle Physics

Instructor(s): P. Krieger

Enr: 28	Resp: 15							Retake: 92%
	1	2	3	4	5	6	7	Mean
Presents	0	0	0	26	53	20	0	4.9
Explains	0	0	0	26	60	13	0	4.9
Communicates	0	0	0	13	26	53	6	5.5
Teaching	0	0	0	0	33	46	20	5.9
Workload	6	0	13	53	20	6	0	4.0
Difficulty	6	6	6	53	13	13	0	4.0
Learn Exp	0	7	0	23	30	23	15	5.1

Krieger was enthusiastic, and overall, a good lecturer. Students thought that he was very helpful whenever they had problems.

### PHY 359H1S Physics of the Earth

Instructor(s): J. Mitrovica

Enr: 24	Resp: 22							Retake: 100%
	1	2	3	4	5	6	7	Mean
Presents	0	0	0	0	18	40	40	6.2
Explains	0	0	0	4	9	18	68	6.5
Communicates	0	0	0	0	0	13	86	6.9
Teaching	0	0	0	0	0	31	68	6.7
Workload	0	0	4	72	9	13	0	4.3
Difficulty	0	0	0	63	27	9	0	4.5
Learn Exp	0	0	0	14	28	19	38	5.8

Students really liked this course! Some of the words used to describe Mitrovica: exceptional, enthusiastic, organized, approachable, helpful and friendly.

### PHY 407H1F Introduction to Computational Physics

Instructor(s): B. Holdom

Enr: 10	Resp: 7							Retake: 50%
	1	2	3	4	5	6	7	Mean
Presents	0	0	14	28	28	14	14	4.9
Explains	0	0	14	14	42	28	0	4.9
Communicates	0	14	14	14	57	0	0	4.1
Teaching	0	0	0	28	42	28	0	5.0
Workload	14	0	57	28	0	0	0	3.0
Difficulty	14	0	28	42	14	0	0	3.4
Learn Exp	0	0	0	60	0	40	0	4.8

Some students did not like the structure of the course and wished they were tested more on their understanding of how to use commands in solving problems. However, Holdom was well liked.

### PHY 408H1S Times Series Analysis

Instructor(s): R. Bailey

Enr: 9	Resp: 5							Retake: 80%
	1	2	3	4	5	6	7	Mean
Presents	0	0	0	0	80	20	0	5.2
Explains	0	0	0	40	40	20	0	4.8
Communicates	0	0	0	20	60	0	20	5.2
Teaching	0	0	0	20	60	0	20	5.2
Workload	0	0	0	40	40	0	20	5.0
Difficulty	0	0	0	40	60	0	0	4.6
Learn Exp	0	0	0	60	40	0	0	4.4

### PHY 409H1S Quantum Methods Using Computer Algebra

Instructor(s): P. Savaria

Enr: 10	Resp: 8							Retake: 62%
	1	2	3	4	5	6	7	Mean
Presents	0	0	25	25	37	12	0	4.4
Explains	0	0	12	37	25	25	0	4.6
Communicates	0	0	0	37	12	50	0	5.1
Teaching	0	0	0	25	37	37	0	5.1
Workload	12	0	12	12	37	25	0	4.4
Difficulty	12	0	12	62	12	0	0	3.6
Learn Exp	0	16	0	50	0	16	16	4.5

### PHY 459H1F Macroscopic Physics

Instructor(s): H. Shahnas

Enr: 14	Resp: 9							Retake: 57%
	1	2	3	4	5	6	7	Mean
Presents	11	11	0	11	33	33	0	4.4
Explains	11	11	11	44	11	11	0	3.7
Communicates	11	11	22	33	11	11	0	3.6
Teaching	0	22	0	44	22	11	0	4.0
Workload	0	0	0	100	0	0	0	4.0
Difficulty	0	0	0	85	0	14	0	4.3
Learn Exp	20	0	20	60	0	0	0	3.2



**PHY 460H1S Nonlinear Physics**

Instructor(s): T. Shepherd

Enr: 23	Resp: 15							Retake: 57%
	1	2	3	4	5	6	7	Mean
Presents	0	0	0	20	26	46	6	5.4
Explains	0	0	13	26	33	20	6	4.8
Communicates	0	0	6	6	13	53	20	5.7
Teaching	0	0	0	26	26	26	20	5.4
Workload	0	0	0	40	40	20	0	4.8
Difficulty	0	0	0	26	33	13	26	5.4
Learn Exp	0	14	7	28	14	28	7	4.6

Students found this subject interesting. The course was however, thought to be much too difficult (particularly the math and the problem sets). Shepherd was organized and approachable.

**PHY 483H1F Relativity Theory I**

Instructor(s): A. Peet

Enr: 23	Resp: 11							Retake: 60%
	1	2	3	4	5	6	7	Mean
Presents	0	0	20	0	40	40	0	5.0
Explains	0	0	20	20	40	20	0	4.6
Communicates	0	0	0	0	45	36	18	5.7
Teaching	0	9	9	54	18	9	0	4.1
Workload	0	0	0	9	36	45	9	5.5
Difficulty	0	0	0	9	36	45	18	5.6
Learn Exp	0	0	30	30	20	20	0	4.3

Peet was organized, enthusiastic and students appreciated her passion for the material. However, a few students felt she was unapproachable and somewhat intimidating. Also, she tended to skip through material and concentrated on little math subtleties.

**PHY 484H1S Relativity Theory II**

Instructor(s): C. Dyer

Enr: 6	Resp: 6							Retake: 60%
	1	2	3	4	5	6	7	Mean
Presents	0	0	0	50	0	50	0	5.0
Explains	0	0	0	33	16	33	16	5.3
Communicates	0	0	0	0	66	16	16	5.5
Teaching	0	0	0	0	66	33	0	5.3
Workload	0	0	50	33	16	0	0	3.7
Difficulty	0	0	16	50	0	33	0	4.5
Learn Exp	0	20	0	60	0	20	0	4.0

**PHY 485H1F Modern Optics**

Instructor(s): R. Marjoribanks

Enr: 24	Resp: 18							Retake: 44%
	1	2	3	4	5	6	7	Mean
Presents	11	0	22	22	22	16	5	4.7
Explains	5	5	5	33	0	44	5	4.7
Communicates	11	0	0	0	38	16	33	5.4
Teaching	11	0	5	22	44	11	5	4.4
Workload	0	5	0	33	27	16	16	5.0
Difficulty	0	5	5	22	27	16	22	5.1
Learn Exp	0	11	11	29	0	23	23	4.8

**PHY 489H1F Introduction to High Energy Physics**

Instructor(s): P. Krieger

Enr: 25	Resp: 23							Retake: 90%
	1	2	3	4	5	6	7	Mean
Presents	0	0	13	17	47	21	0	4.8
Explains	4	0	8	34	30	21	0	4.5
Communicates	0	4	17	26	30	17	4	4.5
Teaching	0	0	13	21	30	26	8	5.0
Workload	0	0	5	50	35	10	0	4.5
Difficulty	0	0	4	40	27	18	9	4.9
Learn Exp	5	5	5	42	26	10	5	4.3

Students felt that Krieger was very nice, approachable, and tried to answer all of the students' questions.

**PHY 491H1S Current Interpretations of Quantum Mechanics**

Instructor(s): J. Sipe

Enr: 12	Resp: 14							Retake: 100%
	1	2	3	4	5	6	7	Mean
Presents	0	0	0	7	14	21	57	6.3
Explains	0	0	0	7	14	21	57	6.3
Communicates	0	0	0	0	0	21	78	6.8
Teaching	0	0	0	0	7	35	57	6.5
Workload	0	0	0	66	16	16	0	4.5
Difficulty	0	0	0	33	33	25	8	5.1
Learn Exp	0	0	0	0	27	54	18	5.9

Students felt this was a great course. One student said that Sipe deserves a medal. There was some problems with the marking scheme, the essay was thought to be worth too much and the problem sets marked too harshly.

