

PROFESSOR Paul Withers

NUMBER OF STUDENTS RESPONDING: 9

NUMBER OF STUDENTS ENROLLED: 10

PERCENT OF ENROLLED STUDENTS RESPONDING: 90

STATISTICS REFLECT FREQUENCY OF RESPONSES

## I. SECTION A: COURSE EVALUATION

		NR	1	2	3	4	5		MEAN	ST DEV
1. RELEVANCE OF ASSIGNED READINGS [(1) LOW TO (5) HIGH]	POOR	0	0	0	0	4	5	EXCELLENT	4.556	0.527
2. DIFFICULTY OF COURSE [(1) EASY TO (5) DIFFICULT]	POOR	0	0	1	4	4	0	EXCELLENT	3.333	0.707
3. WORKLOAD IN COURSE [(1) LIGHT TO (5) HEAVY]	POOR	0	0	1	5	3	0	EXCELLENT	3.222	0.667
4. OVERALL RATING OF DISCUSSION INSTRUCTOR (IF APPLICABLE)	POOR	6	0	0	1	0	2	EXCELLENT	4.333	1.155
5. OVERALL RATING OF LAB INSTRUCTOR (IF APPLICABLE)	POOR	8	0	0	0	1	0	EXCELLENT	4.000	N/A
6. USEFULNESS OF ASSIGNMENTS AND PAPERS	POOR	0	0	0	1	5	3	EXCELLENT	4.222	0.667
7. OVERALL COURSE RATING	POOR	0	0	0	1	4	4	EXCELLENT	4.333	0.707

## II. SECTION B: FACULTY EVALUATION

		NR	1	2	3	4	5		MEAN	ST DEV
8. EFFECTIVENESS IN EXPLAINING CONCEPTS	POOR	0	0	0	0	5	4	EXCELLENT	4.444	0.527
9. ABILITY TO STIMULATE INTEREST IN SUBJECT	POOR	0	0	0	0	6	3	EXCELLENT	4.333	0.500
10. ENCOURAGEMENT OF CLASS PARTICIPATION	POOR	0	0	0	0	1	8	EXCELLENT	4.889	0.333
11. FAIRNESS IN GRADING	POOR	1	0	0	1	4	3	EXCELLENT	4.250	0.707
12. PROMPTNESS IN RETURNING ASSIGNMENTS	POOR	2	0	0	0	1	6	EXCELLENT	4.857	0.378
13. QUALITY OF FEEDBACK TO STUDENTS	POOR	0	0	0	0	7	2	EXCELLENT	4.222	0.441
14. AVAILABILITY OUTSIDE OF CLASS	POOR	0	0	0	0	1	8	EXCELLENT	4.889	0.333
15. OVERALL RATING OF INSTRUCTOR	POOR	0	0	0	0	4	5	EXCELLENT	4.556	0.527

## III. SECTION C: TF/TA EVALUATION

		NR	1	2	3	4	5		MEAN	ST DEV
16. PREPARATION FOR CLASS	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A
17. COMMAND OF THE SUBJECT	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A
18. ABILITY TO CONVEY FACTS AND EXPLAIN KEY CONCEPTS IN A DIGESTIBLE MANNER	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A
19. ENTHUSIASM FOR THE SUBJECT AND ABILITY TO STIMULATE STUDENT INTEREST	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A
20. AVAILABILITY OUTSIDE CLASS TIME	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A
21. QUALITY OF EVALUATION OF WORK	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A
22. PROMPTNESS OF RETURN OF GRADED ASSIGNMENTS AND COMMUNICATION OF STANDING IN CLASS	POOR	9	0	0	0	0	0	EXCELLENT	N/A	N/A

## IV. SECTION D: OTHER

		NR	1	2	3	4	5		MEAN	ST DEV
23. CLARITY AND ACHIEVEMENT OF COURSE OBJECTIVES	POOR	0	0	0	1	3	5	EXCELLENT	4.444	0.726
24. EFFECTIVENESS OF THE USE OF CLASS TIME	POOR	0	0	0	1	5	3	EXCELLENT	4.222	0.667
25. VALUE OF COURSE TOWARD DEVELOPMENT OF INTELLECTUAL SKILLS (CRITICAL ANALYSIS, WRITTEN/ORAL COMMUNICATION, RESEARCH)	POOR	0	0	0	2	4	3	EXCELLENT	4.111	0.782
26. LEVEL OF INTELLECTUAL STIMULATION OF THE COURSE	POOR	0	0	0	1	4	4	EXCELLENT	4.333	0.707
27. VALUE OF LAB/DISCUSSION AS A SUPPLEMENT TO THE LECTURE/READING	POOR	1	0	0	0	1	7	EXCELLENT	4.875	0.354
28. PROFESSOR'S PREPARATION FOR CLASS	POOR	0	0	0	0	1	7	EXCELLENT	4.875	0.354
29. PROFESSOR'S COMMAND OF THE SUBJECT	POOR	0	0	0	0	5	4	EXCELLENT	4.444	0.527
30. PROFESSOR'S ENTHUSIASM FOR SUBJECT OF THE COURSE	POOR	0	0	0	0	2	7	EXCELLENT	4.778	0.441
31. TO WHOM WOULD YOU RECOMMEND THIS COURSE? (SELECT ONE PLEASE) [1=NOBODY, 2=ONLY MAJORS/MINORS, 3=ONLY MAJORS/MINORS WITH GREAT INTEREST IN SUBJECT, 4=STUDENTS SEEKING DISTRIBUTION/DIVISIONAL STUDIES CREDIT, 5=STUDENTS SEEKING AN INTERESTING ELECTIVE]	POOR	0	0	2	3	1	2	EXCELLENT	3.375	1.188
32. HOW MUCH TIME PER WEEK OUTSIDE OF CLASS DID YOU SPEND ON THE COURSE? [1=LESS THAN 1 HR., 2=1-3 HRS., 3=3-5 HRS., 4=5-10 HRS., 5=MORE THAN 10 HRS.]	POOR	0	0	1	5	2	1	EXCELLENT	3.333	0.866
33. WHAT GRADE DO YOU EXPECT IN THE COURSE SOLELY BASED ON WORK COMPLETED THUS FAR? [1=F, 2=D, 3=C, 4=B, 5=A]	POOR	0	0	0	0	6	3	EXCELLENT	4.333	0.500

PROFESSOR Paul Withers

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STATISTICS REFLECT PERCENTAGE OF RESPONSES

## I. SECTION A: COURSE EVALUATION

		NR	1	2	3	4	5		MEAN	ST DEV
1. RELEVANCE OF ASSIGNED READINGS [(1) LOW TO (5) HIGH]	POOR	0	0	0	0	44	56	EXCELLENT	4.556	0.527
2. DIFFICULTY OF COURSE [(1) EASY TO (5) DIFFICULT]	POOR	0	0	11	44	44	0	EXCELLENT	3.333	0.707
3. WORKLOAD IN COURSE [(1) LIGHT TO (5) HEAVY]	POOR	0	0	11	56	33	0	EXCELLENT	3.222	0.667
4. OVERALL RATING OF DISCUSSION INSTRUCTOR (IF APPLICABLE)	POOR	67	0	0	11	0	22	EXCELLENT	4.333	1.155
5. OVERALL RATING OF LAB INSTRUCTOR (IF APPLICABLE)	POOR	89	0	0	0	11	0	EXCELLENT	4.000	N/A
6. USEFULNESS OF ASSIGNMENTS AND PAPERS	POOR	0	0	0	11	56	33	EXCELLENT	4.222	0.667
7. OVERALL COURSE RATING	POOR	0	0	0	11	44	44	EXCELLENT	4.333	0.707

## II. SECTION B: FACULTY EVALUATION

		NR	1	2	3	4	5		MEAN	ST DEV
8. EFFECTIVENESS IN EXPLAINING CONCEPTS	POOR	0	0	0	0	56	44	EXCELLENT	4.444	0.527
9. ABILITY TO STIMULATE INTEREST IN SUBJECT	POOR	0	0	0	0	67	33	EXCELLENT	4.333	0.500
10. ENCOURAGEMENT OF CLASS PARTICIPATION	POOR	0	0	0	0	11	89	EXCELLENT	4.889	0.333
11. FAIRNESS IN GRADING	POOR	11	0	0	11	44	33	EXCELLENT	4.250	0.707
12. PROMPTNESS IN RETURNING ASSIGNMENTS	POOR	22	0	0	0	11	67	EXCELLENT	4.857	0.378
13. QUALITY OF FEEDBACK TO STUDENTS	POOR	0	0	0	0	78	22	EXCELLENT	4.222	0.441
14. AVAILABILITY OUTSIDE OF CLASS	POOR	0	0	0	0	11	89	EXCELLENT	4.889	0.333
15. OVERALL RATING OF INSTRUCTOR	POOR	0	0	0	0	44	56	EXCELLENT	4.556	0.527

## III. SECTION C: TF/TA EVALUATION

		NR	1	2	3	4	5		MEAN	ST DEV
16. PREPARATION FOR CLASS	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A
17. COMMAND OF THE SUBJECT	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A
18. ABILITY TO CONVEY FACTS AND EXPLAIN KEY CONCEPTS IN A DIGESTIBLE MANNER	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A
19. ENTHUSIASM FOR THE SUBJECT AND ABILITY TO STIMULATE STUDENT INTEREST	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A
20. AVAILABILITY OUTSIDE CLASS TIME	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A
21. QUALITY OF EVALUATION OF WORK	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A
22. PROMPTNESS OF RETURN OF GRADED ASSIGNMENTS AND COMMUNICATION OF STANDING IN CLASS	POOR	100	0	0	0	0	0	EXCELLENT	N/A	N/A

## IV. SECTION D: OTHER

		NR	1	2	3	4	5		MEAN	ST DEV
23. CLARITY AND ACHIEVEMENT OF COURSE OBJECTIVES	POOR	0	0	0	11	33	56	EXCELLENT	4.444	0.726
24. EFFECTIVENESS OF THE USE OF CLASS TIME	POOR	0	0	0	11	56	33	EXCELLENT	4.222	0.667
25. VALUE OF COURSE TOWARD DEVELOPMENT OF INTELLECTUAL SKILLS (CRITICAL ANALYSIS, WRITTEN/ORAL COMMUNICATION, RESEARCH)	POOR	0	0	0	22	44	33	EXCELLENT	4.111	0.782
26. LEVEL OF INTELLECTUAL STIMULATION OF THE COURSE	POOR	0	0	0	11	44	44	EXCELLENT	4.333	0.707
27. VALUE OF LAB/DISCUSSION AS A SUPPLEMENT TO THE LECTURE/READING	POOR	11	0	0	0	11	78	EXCELLENT	4.875	0.354
28. PROFESSOR'S PREPARATION FOR CLASS	POOR	0	0	0	0	11	78	EXCELLENT	4.875	0.354
29. PROFESSOR'S COMMAND OF THE SUBJECT	POOR	0	0	0	0	56	44	EXCELLENT	4.444	0.527
30. PROFESSOR'S ENTHUSIASM FOR SUBJECT OF THE COURSE	POOR	0	0	0	0	22	78	EXCELLENT	4.778	0.441
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32. HOW MUCH TIME PER WEEK OUTSIDE OF CLASS DID YOU SPEND ON THE COURSE? [1=LESS THAN 1 HR., 2=1-3 HRS., 3=3-5 HRS., 4=5-10 HRS., 5=MORE THAN 10 HRS.]	POOR	0	0	11	56	22	11	EXCELLENT	3.333	0.866
33. WHAT GRADE DO YOU EXPECT IN THE COURSE SOLELY BASED ON WORK COMPLETED THUS FAR? [1=F, 2=D, 3=C, 4=B, 5=A]	POOR	0	0	0	0	67	33	EXCELLENT	4.333	0.500

AS 781 A1  
Paul Withers

**Fall 2012**  
**Course Evaluation Comments**

Course: AS 781 A1, Planetary Atmos  
Instructor: Paul Withers

1. What were the most positive aspects of the course?

- Professor Withers is extremely engaging and designed lessons that taught the context well. Labs were very interesting and informative and good practice. Good mix of lab and class
- The use of labs to illustrate lecture topics. Lecture notes to read before class.
- It was really refreshing to have a lab focused hands on programming based curve instead of the usual problem set based approach. Loved the homework "hand in" format. 1 on 1 time was really valuable
- I found the lab aspects of this course the most useful. It really tied concepts we learned in class and allowed us to use them on a practical basis.
- Breadth of material covered, integration of hands on material
- The lab sessions with the programs using the topics discussed in class was good for understanding the matter, making the materials readily available on blackboard helpful, JITT questions was a helpful concept
- It was a refreshing change from the rigid lecture style of most courses I've taken. The labs were top notch and very informative
- Doing hands on in computer lab, Teacher knows this stuff, Class is discussion like with good student participation
- Paul was an awesome teacher. I like the computer/lab parts of the class, and the JITT made me do the reading before class, so I was always at least a bit familiar with the material coming in to the lecture

2. What, if any, changes would you recommend for the next offering of the course? Be as specific as possible.

- Make the term project due any day other than the day after thanksgiving. I was thrown off a few times by changing schedules (flipping lab and lectures) but I think that is more on me than on the class.
- Just a suggested experiment: one downside to lab is that we spend much of the time with our peers hacking through the code as opposed to discussing the physics. Once we go home and get it running we're on our own. What if we were assigned the 1<sup>st</sup> couple of tasks to complete before lab and then we could better explore and discuss the physics with our peers and you the instructor once we're in lab? Just a thought.
- It's hard to say... on one hand I felt like we only brushed upon many topics and my need for a deeper, more advanced knowledge of a topic wasn't satisfied. However, I did enjoy the overview of all the main concepts.

Note: (?) indicates that the student's handwriting was illegible and the best effort was made to interpret what was written.

AS 781 A1  
Paul Withers

- A little less time spent debugging code and more using debugged code or doing pencil and paper concept explorations a little more emphasis on where planetary atmospheres differ from stall (?) or atmospheres
- It was difficult to remember to do the JITT questions before 7 am on the day of class, towards the end of the semester, especially since the lecture days kept juggling between Mondays and Wednesdays
- Try introducing some problem sets on top of the lab assignments
- More feedback on JITTs/HW. It is difficult to know what teacher was looking for w/o feedback. Give the grading rubric before the class projects are due
- More focus on exoplanets, current research and observations. Maybe some of the reading could be (recently published) journal articles

3. What, if any, adjustments would you recommend to the instructor's teaching method or style?

- Love the 2 minute break to get my brain back in gear. Puzzles then are fun, too. Jokes and liveliness are great.
- No suggestions. I enjoyed the interactive informal lecturing style.
- A lot of class time was spent making lists which might not be the most efficient way to teach a class at this level, more time could be given subtleties and tricks with the trade
- More use of blackboard, but that's about it
- I have to admit I was a little skeptical at first of things like JITT questions, but in the end it worked really well

4. Comment on the feedback you received from the instructor of the course. Was it useful?

- I would have liked more feedback throughout the course since I do not really know how I'm doing in the class. Feedback on my programs was the most useful I got and was really helpful.
- Feedback was astounding. Really enjoyed the oral one-on-one turning in of homework. Instant feedback that felt personalized
- In person grading of code was nicer than submitting code 2 not learning where the bugs are but a little more clarity as to how much bugs were hurting grade would have relieved worry
- Yes very much so
- Yes, I wish I had known my grades for the HW, though so I would have had a little better evaluation of where I was standing (grade-wise)

5. Comment on the frequency and length of assignments, exams, and lab reports.

- Term projects are great but change the due date! Labs were very manageable especially towards the end of the semester when I knew IDL better. JITT were slightly annoying because I always forgot to do them, but were valuable

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- HW every few weeks to wrap up labs: project instead of exam- useful assignments with a good timeline
- Just right
- Perfect on all accounts. I would maybe add weekly or biweekly updates on the project to encourage students to work on it earlier on.
- Frequency fine, JITT didn't always encourage reading as deeply as a problem set would have, but gave an ok coverage of the breadth of material which maybe more appropriate for this level
- The lab assignments were due at a nice weekly or biweekly pace. No real complaints
- Seemed just right
- The assignments were great- not too many and I liked how we started them in class

6. Comment on the selection and amount of reading. Which readings were the most and which were the least valuable? Why?

- Readings were well-chosen and relevant. Lab notes were especially great and I can't imagine how much time went into prepping those.
- Excellent use of multiple resources. Clearest readings were the ones written by instructor.
- Targeting readings to individual chapters in each book was very helpful- made more than simply assigning a huge chunk of material
- Positives: no need to buy books; reading available on web, Negatives: Reading spread out among so many sources, I would package the readings by class
- Most of the readings posted on blackboard was really helpful
- All reading was well chosen; definitely learned most from professor's own written notes and Sanchez- Lavega
- Good amount of reading- all valuable
- I liked having the relevant sections of the reading on blackboard to save time scouring through books

7. Comment on the TA/TF or lab instructor for the course. What did he/she do well? What could he/she improve?

- See separate TA/TF comments if applicable.

8. What skills and understanding have you gained from this course?

- Most obvious one is better programming skills especially in IDL. I learned a lot about atmospheric phenomena and am much more confident in my skills of modeling (?) and quantitative abilities.
- Better understanding of some basic concepts and their applications to planetary atmosphere. Resources to find more information if I need it.
- Better understanding of a lot of different processes that go on in planetary atmospheres

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AS 781 A1  
Paul Withers

- IDL integration skills and general computing skills, Much knowledge about atmospheres on different planets
- I knew very little about planetary atmospheres. I learned a lot. I also picked up some useful teaching methods and I learned some new IDL tricks

9. General Comments:

- Paul is a great teacher and put together a great course! I am from a different department and while I probably did not get as much out of it as the Astronomy grad students, Paul made sure that I was engaged and learning interesting/useful information and skills. I'm glad I took this course.
- JITT- Annoying but admittedly very useful, also giving the class a few minutes to discuss a question before asking for responses is great.
- Biggest issue was readings. I would have liked it to be packaged together by class session rather than by source.
- The resources posted on blackboard were great and invaluable. Teacher was well prepared for every class
- This class was excellent

Note: (?) indicates that the student's handwriting was illegible and the best effort was made to interpret what was written.