ASTR 12720 1, PHSC 12720 1 - Exoplanets - Instructor(s): Jacob Lyle Bean

Project Title: **College Course Feedback - Winter 2024**

Number Enrolled: **42**
Number of Responses: **22**

Report Comments

Opinions expressed in these evaluations are those of students enrolled in the specific course and do not represent the University.

Creation Date: **Thursday, March 28, 2024**

What are the most important things that you learned in this course? Please reflect on the knowledge and skills you gained.

Comments
exoplanet detection techniques
What an exoplanet is and how astronomers find them.
I definitely learned a lot in this class. Much of the course content was new to me – I didn't even really know what Exoplanets were before this. Let alone how we knew about them, how we detect them, and all that.
Methods for finding + identifying properties of exoplanets, current knowledge of the frequencies of different types of exoplanets + some of the physics behind them
Exoplanet discovery and frequency basics.
ALLLL about exoplanets. First half of the course is how we detect exoplanets. second half of the course is about the habitability of exoplanets, what we know about their atmospheres, etc.
I learned about a variety of methods that astrophysicists are using to detect and learn about exoplanets. I also learned about how astrophysicists classify exoplanets.
The most important things that I learned in this course were the techniques used to find extrasolar planets, the formation and structure of the galaxy and the bodies within it, and the physics behind all of it.
Exoplanet detection techniques, categorization, and the search for habitable life on other planets – this course was a lot more of exoplanet detection than I thought it would be, but I enjoyed everything a lot!
Exoplanet detection methods, demographics, atmosphere, habitable zones
Techniques for detecting and determining properties of exoplanets, why the study of exoplanets is important/interesting, and what the ramifications are for potential extraterrestrial life.
how to find exoplanets and how to find planets that are habitable.
The most important thing I learned in this course is how new and important the field of exoplanet research is.

Describe how aspects of this course (lectures, discussions, labs, assignments, etc.) contributed to your learning.

Comments
i learned about exoplanets
The labs really helped to simplify the concepts explained in lectures by making them accessible to us.
Lectures and labs contributed the most
The lectures are important to attend – I missed one and paid for it dearly. He posts the slides but there's a lot of information on the quizzes that wasn't on the slides, so taking good notes is helpful too. We always completed the homework in class, which made life very convenient and easy but I think it made me fall behind on being able to do the math on my own. The readings were often nearly incomprehensible and didn't really feel central to the course. I often didn't do them and felt no consequence.
Lectures were well–organized and clear, labs were solid extensions of the course material
Lectures and homework identified key information about exoplanets. Readings supplemented for clarity or more specifics.
The lectures were excellent. Each lecture is followed by a short quiz. This is a useful model for making sure you understood the stuff from class, and we often work through the problems in the quizzes in class. I really enjoyed how this class was structured, except... My only complaint is that the labs were super boring. Basically sit and do algebra for two hours and go on your way. I don't understand why there's a lab component, they were super tedious and I didn't gain anything from them. Not the fault of the TAs or the prof I think, probably required by department, but still sucked.
Most of my learning came from lectures, but I sometimes gained additional insights from the labs.
The lectures greatly enhanced my learning by teaching me the material in a straightforward and comprehensible manner, the labs allowed me to put that newly–acquired knowledge into practice in a practical format, and the assignments (the quizzes and the exams) informed me on the depth of my learning and where I needed to make improvements.
Lectures were really great because not only did we cover a ton of material, but we also did all of the math–related homework questions together as we went through the lectures. The labs also connected very well to lectures and homework assignments.
the labs were quite cool
Lectures were extremely engaging. Prof Bean is fantastic at making dry scientific concepts super interesting and approachable.
Prof. Bean is amazing and the lectures were great + accessible to those with little experience. The course had computations but ultimately wasn't too math–heavy and was largely conceptual. The homework assignments were useful for synthesizing the core concepts from each lecture, and the labs were cool to see some of the applications of things we learned in class though tedious at times. The readings were a mixed bag – the book on how to find exoplanets was helpful and accessible, but the other readings were very advanced with a lot of complicated maths and were largely unintelligible. Fortunately, you don't need to understand the readings in depth to succeed in the class because everything important is covered in lecture.
Attending lectures was key because the professor would go on some depth explanation but then summarize what he thinks is key which is what you really need to pay attention to. He said went over the answers to the homework quizzes during lecture.
The lectures were very clear and doing problems in class with Professor Bean walking us through it helped a lot.

Please respond to the following:

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This course challenged me intellectually.	4.28	4.00	0.00%	0.00%	11.11%	50.00%	38.89%
I understood the purpose of this course and what I was expected to gain from it.	4.28	4.00	0.00%	0.00%	11.11%	50.00%	38.89%
I understood the standards for success on assignments.	4.24	4.00	0.00%	0.00%	11.76%	52.94%	35.29%
Class time enhanced my ability to succeed in graded assignments.	4.35	4.00	0.00%	0.00%	5.88%	52.94%	41.18%
I received feedback on my performance that helped me improve my subsequent work.	4.06	4.00	0.00%	5.56%	16.67%	44.44%	33.33%
My work was evaluated fairly.	4.22	4.00	0.00%	0.00%	5.56%	66.67%	27.78%
I felt respected in this class.	4.22	4.00	0.00%	5.56%	5.56%	50.00%	38.89%
Overall, this was an excellent course.	4.06	4.00	0.00%	5.56%	16.67%	44.44%	33.33%

Additional comments about the course:

Comments
Not bad
Professor Bean cared about his students and their success which I appreciated. He tried to make the class more accommodating while also not making it a throw–away course. I do feel like I learned a lot.
There's a ton of course content, it almost feels like a little too much to really grasp rather than cramming/memorizing. The math is easy if you're a math kid, and challenging but not impossible if you're not a math kid.
I felt like this course suffered from taking a really cool, interesting topic and shrinking it down to algebra and equations. just not super interesting to me, but maybe it's someone else's thing. For a course I wasn't interested in, it was well–taught and I did learn a lot
This was a great course! If you have any interest in astronomy/learning about space definitely take it. Prof. Bean is very experienced in his field and passionate about his work, and he's also a good speaker who's good at answering questions and helping you understand the content. The homework assignments are half questions that you do in class, so they help boost your grade, and the exams were very manageable if you studied and paid attention in class. The labs in this course are not too bad – you work independently rather than in a group which gives you more control over your work and you can rewrite the first and second ones for up to full credit if you don't do so well, HOWEVER, FAIR WORD OF WARNING: the second lab is ridiculously tedious and involves you manually analyzing dozens of images worth of data. Don't let this dissuade you from taking the course but for the data analysis you will have partners – MAKE SURE you have partners (preferably of 3 people rather than 2) that will do the work WELL. I had to go back and redo all my partner's images and it took ages because they were careless with the analysis.
not to difficult of a core class. There are definitely harder and easier ones, but this one is pretty manageable, and I would recommend to anyone especially if you are interested in astrophysics at all.

I would recommend this course to:

	No	Yes
Highly-motivated and well-prepared students	0.00%	100.00%
Anyone interested in the topic	0.00%	100.00%

Thinking about your time in the class, what aspect of the instructor's teaching contributed most to your learning?

Comments
lectures
Lectures were definitely the most helpful.
Clear lecturing, obviously very knowledgeable, willing to answer questions.
Professor Bean did a great job of explaining concepts in lecture–– the flow of information was overall well–paced.
In class problems helped make sure that computation expectations were well understood. The labs were a useless waste of time with hours sitting and working on our own laptops like we could do from literally anywhere. They were poorly formatted, often misleading and a very frustrating part of this course.
Professor Bean is great at answering questions, and he's a solid lecturer. Sometimes the lectures are a little bit much of him reading the slides, but he was really good at explaining complex graphs and concepts, which made my learning better
Bean is a good lecturer and he's very willing to answer questions in class.
The instructor's respect for his students and willingness to answer questions and host informal review sessions contributed the most to my learning.
Going through homework questions in class – helped us put everything together and stay engaged during lectures.
Lectures were great, labs helped to break down the things learnt in lectures
Lectures were great, the slides being on Canvas was really helpful and Prof. Bean was very good with answering questions.
Lectures. Professor was clearly very passionate and sometimes started going into abstract topics and using confusing scientific terms but he always came back and said what was important clearly and concisely so everyone could understand the concepts even if they are not so knowledgeable in astrophysics.
The instructor answering questions in a thoughtful manner as well as helping us through problems as a class was very helpful.

What could the instructor modify to help you learn more?

Comments
more clarification or clear lecture quizzes
The labs were kind of tedious but I'm not sure how they could be best improved. Maybe the lecture quizzes and labs could be combined into 4 collaborative psets?
I think there were times when we rushed through content much too quickly, so that I didn't have time to really get a handle on things before we had gone on. I also think the homework should be done differently, though I liked having it in class I think it made me learn less. I relied too heavily on his help and didn't figure out the concepts for myself.
Maybe limit student questions a bit more
Release pdf answers to homework sooner and give more advanced information about midterm format.
Sometimes, especially towards the latter half of the course, the professor moved through the slides too quickly for me to take notes on everything being taught.
I cannot think of anything that the instructor could modify to help me learn more.
i think the slides should deifnitely be more informational and organized better. this could help students a lot before the exams.
More quantitative questions on the homework
I think the more complicated readings should be advertised as for people who have a stronger interest in learning more – a couple of them said more advanced but I spent the first few weeks of the course thinking I had to understand them well and it was really confusing. Also, sometimes there were a lot of slides that said the same thing or a lot of slides that were purely data that we never got to and made the presentations kind of cluttered.
make more concise slides

The Instructor . . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Organized the course clearly.	4.24	4.00	0.00%	0.00%	11.76%	52.94%	35.29%	0.00%
Presented lectures that enhanced your understanding.	4.59	5.00	0.00%	0.00%	0.00%	41.18%	58.82%	0.00%
Facilitated discussions that were engaging and useful.	4.15	4.00	0.00%	0.00%	12.50%	43.75%	25.00%	18.75%
Stimulated your interest in the core ideas of the course.	4.38	4.00	0.00%	0.00%	0.00%	62.50%	37.50%	0.00%
Challenged you to learn.	4.19	4.00	0.00%	0.00%	12.50%	56.25%	31.25%	0.00%
Helped you gain significant learning from the course content.	4.44	4.00	0.00%	0.00%	0.00%	56.25%	43.75%	0.00%
Was available and helpful outside of class.	4.27	4.00	0.00%	0.00%	0.00%	68.75%	25.00%	6.25%
Motivated you to think independently.	4.13	4.00	0.00%	6.25%	12.50%	37.50%	37.50%	6.25%
Worked to create an inclusive and welcoming learning environment.	4.13	4.00	0.00%	6.25%	6.25%	56.25%	31.25%	0.00%
Overall, this instructor made a significant contribution to your learning.	4.50	4.50	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%

Please include the name of the TA/CA/Intern you are evaluating. What aspects of the TA's teaching contributed most to your learning? What could the TA modify to help you learn more? Please include any additional feedback for the TA/CA/Intern.

Comments
Madison Brady
Ritvik Basant
Qiao was absolutely wonderful. She was always willing to help, extremely patient in explaining, and generous with her time. She's also just nice and easy to be around.
Qiao Xue— Qiao was wonderful! Incredibly helpful in lab. One of the smoothest lab sections I've had so far.
The TA that I am evaluating is Qiao Xue. Qiao's respect and compassion that she held for her students contributed most to my learning. I cannot think of anything that Qiao could modify to help me learn more.
Ritvik Basant – I liked how before each lab, he went over some of the key concepts/principles we would be using.
Qian Xue
Madison Brady – super nice and willing to help with any questions on the labs. Grading was fair, maybe a bit nitpicky sometimes but it didn't have a huge impact on grades and you can rewrite the first 2 labs anyway.
Qiao Xue. She was great and so sweet. I went to her office hours a couple of times. She was not my lab TA but she was the reason I could get through the labs and the course. She was also so smart and really did her best to explain in a helpful way. Madison Brady was my lab TA and she was okay
Qiao was a very good TA, and was very helpful with the labs.

The TA/CA or Intern. . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Facilitated discussions that supported your learning.	4.56	5.00	0.00%	0.00%	0.00%	33.33%	41.67%	25.00%
Gave you useful feedback on your work.	4.50	5.00	0.00%	0.00%	16.67%	16.67%	66.67%	0.00%
Stimulated your interest in the core ideas of the class.	4.50	5.00	0.00%	0.00%	8.33%	33.33%	58.33%	0.00%
Challenged you to learn.	4.50	5.00	0.00%	0.00%	8.33%	33.33%	58.33%	0.00%
Helped you succeed in the class.	4.67	5.00	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%
Was available and helpful outside of class.	4.75	5.00	0.00%	0.00%	0.00%	25.00%	75.00%	0.00%
Overall, this individual made a significant contribution to your learning.	4.50	5.00	0.00%	0.00%	8.33%	33.33%	58.33%	0.00%

How much did the following elements of the course contribute to your learning gains?

	Mean	Median	No Gain	A Little Gain	Moderate Gain	Good Gain	Great Gain	N/A
Laboratory Experience	3.80	4.00	6.67%	0.00%	20.00%	53.33%	20.00%	0.00%
Field Trips	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Library Sessions	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Review Sessions	3.50	4.00	7.14%	0.00%	7.14%	21.43%	7.14%	57.14%
Writing Seminars	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Other course elements not mentioned above:

Comments
The review sessions before the midterm/final were helpful!

Is this class a requirement of some sort?

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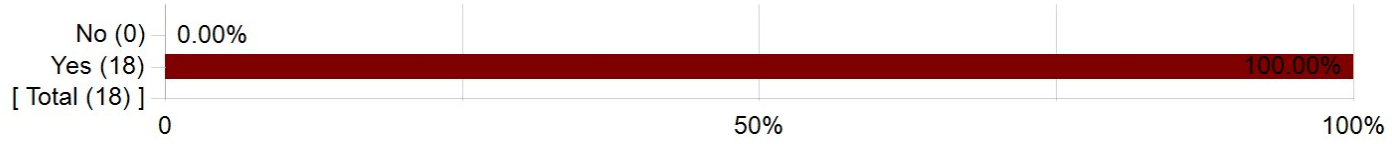
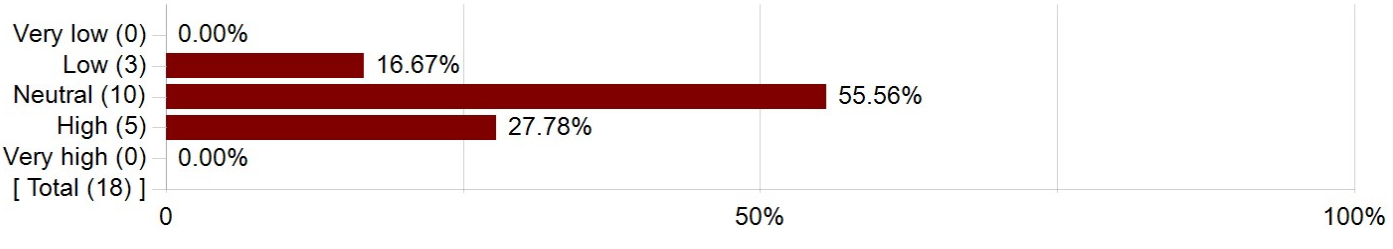
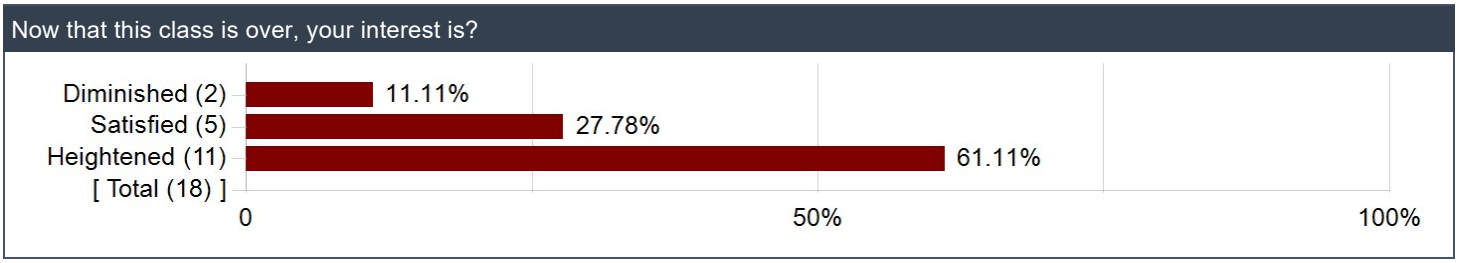


Prior to starting this class, your interest level was?

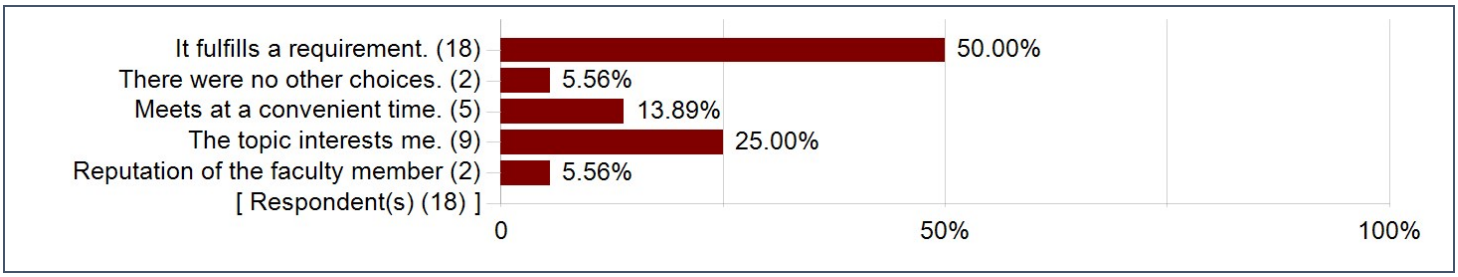
Prior to starting this class, your interest level was?



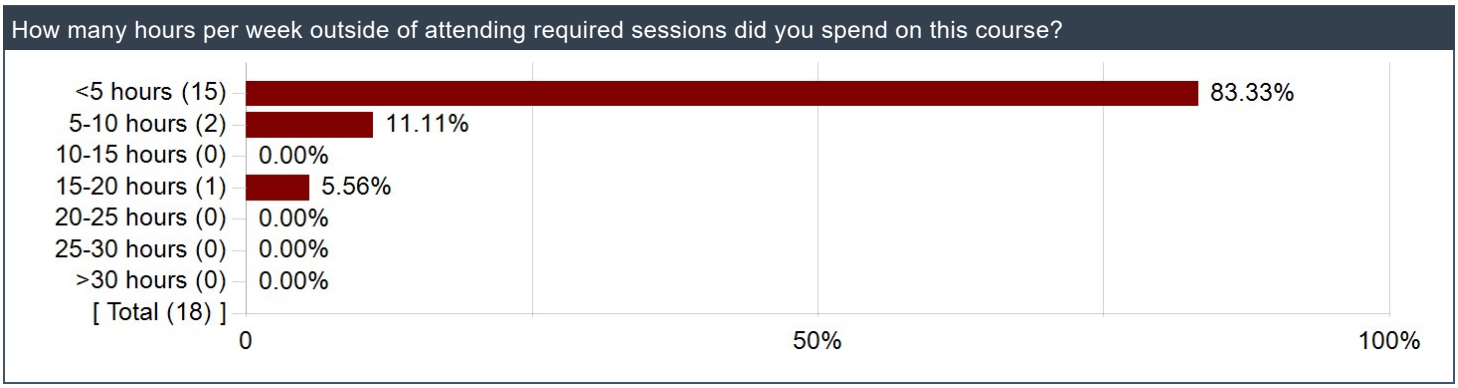
Now that this class is over, your interest is?



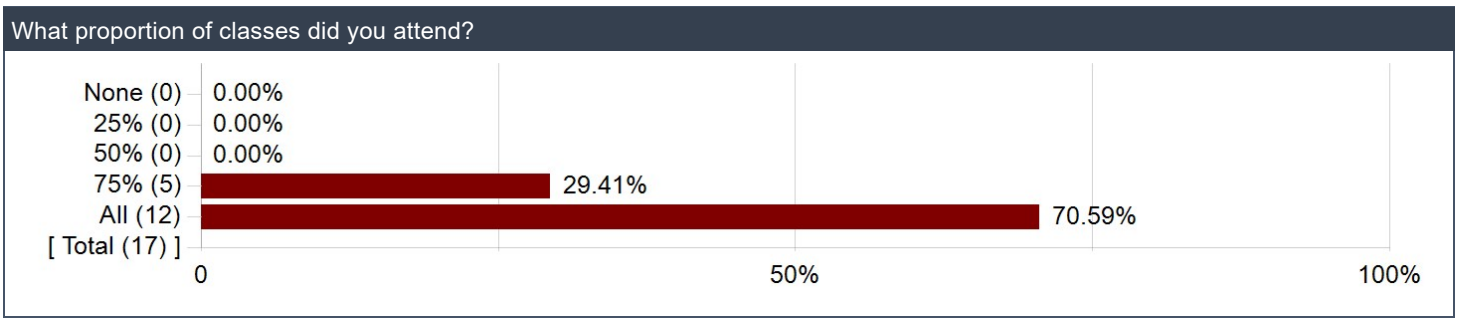
Why did you choose to take this course? (Select all that apply)



How many hours per week outside of attending required sessions did you spend on this course?



What proportion of classes did you attend?



Please comment on the level of difficulty of the course relative to your background and experience.

Comments
can be difficult if you don't have previous astro experience
This course takes work but not unreasonable
As a non–STEM major whose only background was taking Stars, this was a very approachable and interesting class
Not difficult if you have completed algebra.
This course is harder than earth as a planet, but nothing compared to an econ course or another major–level course
The course difficulty is pretty similar to other 12000s physics classes. I personally found it a bit more challenging than stars, but not significantly so.
The level of difficulty of this course was very high, relative to my background and experience.
I took Stars before this and I think the two classes went together quite well with Exoplanets picking up right where we left off in Stars.
Not very, but I think I have more physics and math background than the majority of the class.
Good progression from the Stars class
You don't need a heavy math or physics background for this course, just make sure you understand how negative exponents work and be able to do unit conversions and you'll be fine (also knowing the basics of the electromagnetic spectrum is good). If you took Stars previously it helps you understand some of the concepts at a higher level but the background isn't necessary and Prof. Bean covers everything you need to be successful. Definitely would recommend for anyone who's interested in the topic because your success is largely dependent on your engagement – if you don't show up to lectures or have absolutely no interest and are just doing it for the requirement it might not be for you, but if you have some interest in astronomy and show up to lectures you'll be fine
Do not need to know much about astrology or physics. The course is manageable for anyone. I took Earth as a planet like a year before I took this class and I was still able to do fine.
It was difficult but not too difficult! It challenged me and it was a lot of fun!