Course Report AS7004 VT20

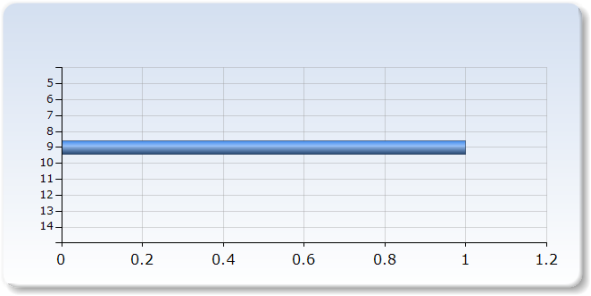
Respondents: 1
Answer Count: 1
Answer Frequency: 100.00%

. Teacher

Teacher
Matthew Hayes

. Number of students who took the exam

Number of students who took the exam	Number of Responses
5	0 (0.0%)
6	0 (0.0%)
7	0 (0.0%)
8	0 (0.0%)
9	1 (100.0%)
10	0 (0.0%)
11	0 (0.0%)
12	0 (0.0%)
13	0 (0.0%)
14	0 (0.0%)
Total	1 (100.0%)



. Number of students who passed the course

Number of students who passed the course	Number of Responses
5	0 (0.0%)
6	0 (0.0%)
7	0 (0.0%)
8	0 (0.0%)
9	1 (100.0%)
10	0 (0.0%)
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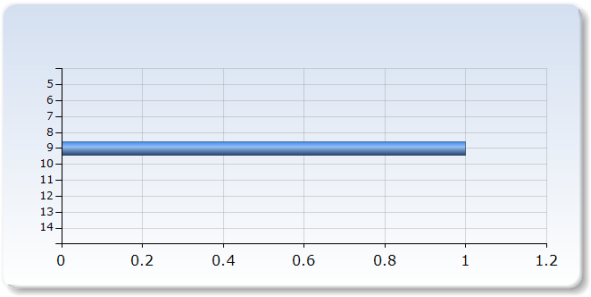

. Description of changes since the previous time the course was given.

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* The course moved to remote teaching.
* The Onsala observations were cancelled, and the radio-astronomy component of the course was done using archival data from 2019. We had online tutorial sessions on this including from the teaching assistant.
* The NOT observations were not done by the students where possible via 'Remote Control' in Zoom. It worked, but was laggy. Unfortunately we could not meet, so it was very difficult to interact with the students directly for their data reduction.

. What are the course's strong points according to the students (summary based on the numerical results as well as their free text answers)

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Numerically: they seemed broadly happy with the relevance of teaching methods to learning outcomes; the examination was appropriate; that they will use this course material after their studies; that the teachers helped them achieve what was necessary; they were able to get support.
Free text: they liked doing real observations and controlling the telescope

. What are the course's weak points according to the students (summary based on the numerical results as well as their free text answers)

What are the course's weak points according to the students (summary based on the numerical results as well as their free text answers)

Numerically: a few thought the prerequisites were only average in order to follow the course (note that ObsI no longer used IRAF/Pyraf this year, for the first time, and did not give UNIX/Linux exposure). There was large spread in the feedback concerning the structuring of the course. One thought it was below average.

Free text: the data reduction software (and varied computing environments) was a problem. They would like some preparatory examples for the data reduction. There was another clear problem with the data reduction software. As IRAF /Pyraf is no longer supported (or easily installable) from STScI we had a whole new set of difficulties getting it to work.

Somebody complained they had not had feedback, but they must have submitted this form before the 3-week deadline for grade submission was passed. I set a submission deadline of June 7 and feedback was sent on June 24.

. The teacher's analysis of the course

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1. In general, I was happy with the outcome of the course, as I perceive it from the students reports. I expected the difficulties encountered with computing and real-time interaction being *very* slow. The reports were generally of an equivalent quality to previous years, and if anything the average (reflected in the grading) was somewhat higher.

I do not have a good explanation for this. It is true that we had less things to do in the evening (calibration data is taken by telescope staff; lots of time was cloudy) and had more time to give demos of the data-reduction and to ask questions. It's hard to tell how engaged the students are via zoom, but it seems that most were.

2. Some students had no familiarity with Linux, and could not well interact with Pyraf. Ordinarily this can easily be solved in the classroom where the teacher can see the screens; however some could not get zoom to work on the same platform, so I could never see what they were doing. This was extremely clunky.

It is anyway now clear that data-reduction in IRAF has to be abandoned for ObsII. See next box.

. Conclusions as well as suggestions for improvements

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We need an alternative to IRAF. I have many ideas about how to port the spectral data analysis to pure python (this was suggested also by one student in the free-text), but it would be quite a lot of course development to do it. If we do manage to do this, we could incorporate demo data-sets that could be worked through in advance, as another student requested (perhaps also evaluated; e.g. at 10% of final grade).