



2022 Spring Individual Report FAS-MATH 230B-Semi-Riemannian Geometry 001 Puskar Mondal

Project Title: **2022 Spring Harvard FAS Course Evaluation**

Course Audience: **10**

Responses Received: **5**

Response Ratio: **50%**

Report Comments

Note:

The order that the questions appear on this report is not the same as the way the questions were displayed to students. The order has been changed to make the report more readable.

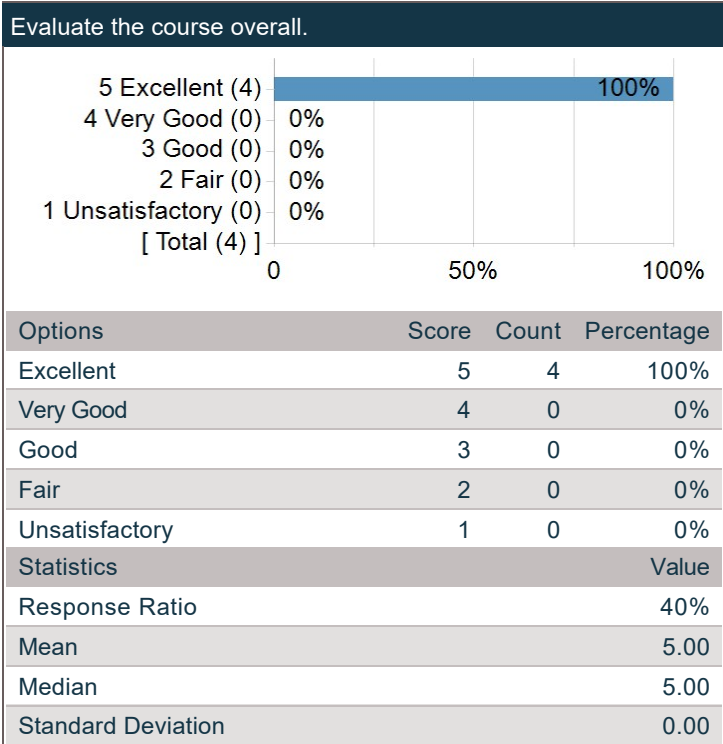
Creation Date: **Tuesday, May 17, 2022**

General Course Questions

Course General Questions

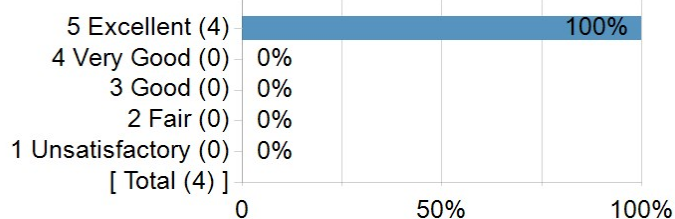
	Count	Excellent	Very Good	Good	Fair	Unsatisfactory	Course Mean	Dept Mean	Division Mean
Evaluate the course overall.	4	100%	0%	0%	0%	0%	5.00	4.00	4.03
Course materials (readings, audio-visual materials, textbooks, lab manuals, website, etc.)	4	100%	0%	0%	0%	0%	5.00	4.07	4.08
Assignments (exams, essays, problem sets, language homework, etc.)	4	75%	25%	0%	0%	0%	4.75	3.80	3.89
Feedback you received on work you produced in this course	4	75%	25%	0%	0%	0%	4.75	3.87	3.89
Section component of the course	0	N/A	N/A	N/A	N/A	N/A	NRP	4.10	4.11

Evaluate the course overall.



Course materials (readings, audio-visual materials, textbooks, lab manuals, website, etc.)

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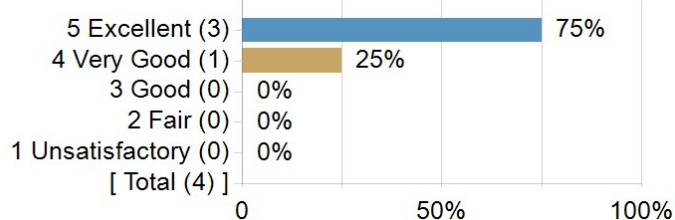
Options	Score	Count	Percentage
Excellent	5	4	100%
Very Good	4	0	0%
Good	3	0	0%
Fair	2	0	0%
Unsatisfactory	1	0	0%
Statistics			Value
Response Ratio			40%
Mean			5.00
Median			5.00
Standard Deviation			0.00

Add comments about course materials?**Comments**

Very informative online supplements!

Assignments (exams, essays, problem sets, language homework, etc.)

Assignments (exams, essays, problem sets, language homework, etc.)



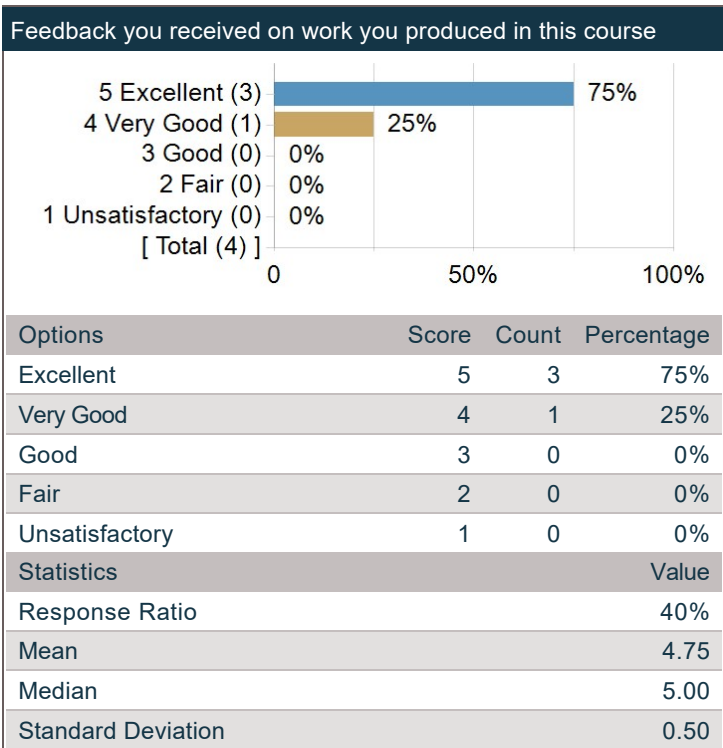
Options	Score	Count	Percentage
Excellent	5	3	75%
Very Good	4	1	25%
Good	3	0	0%
Fair	2	0	0%
Unsatisfactory	1	0	0%
Statistics			Value
Response Ratio			40%
Mean			4.75
Median			5.00
Standard Deviation			0.50

Add comments about course assignments?

Comments

The HW assignments were great, and gave us the opportunity to work out on our own the kinds of calculations that we saw in class, as well as making connections between different ideas presented during the course. Overall, they did a very nice job of tying together the class.

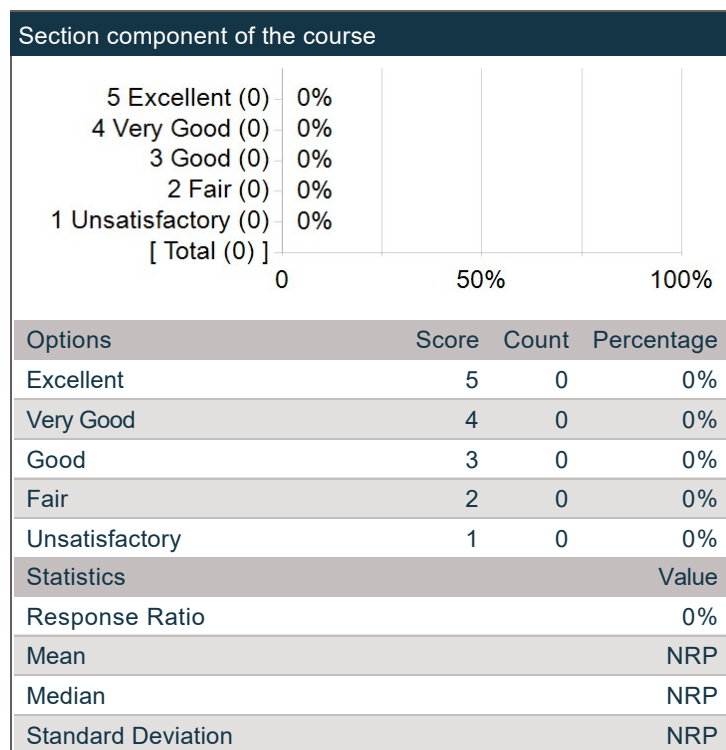
Feedback you received on work you produced in this course



Add comments about course feedback?

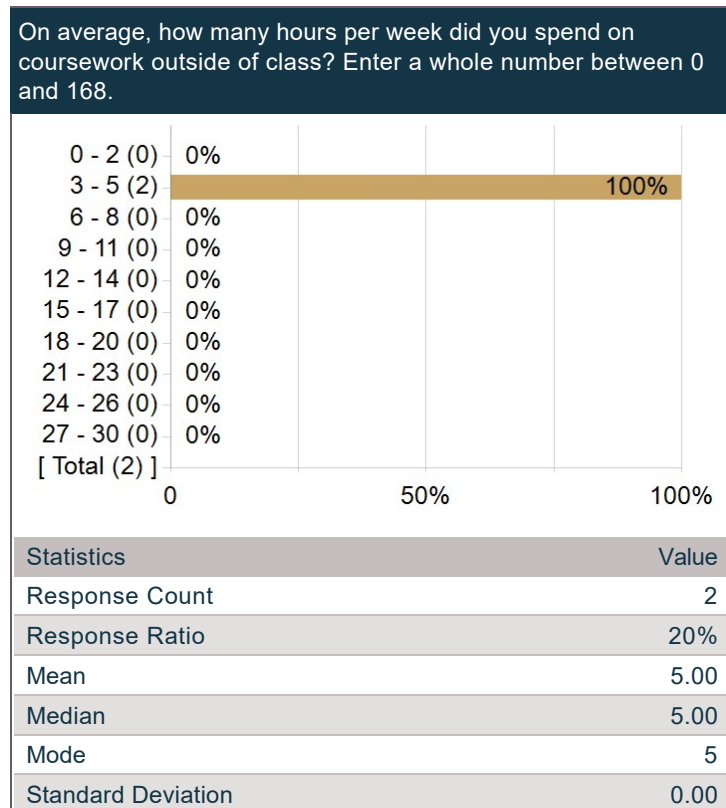
Comments

Feedback was very helpful!

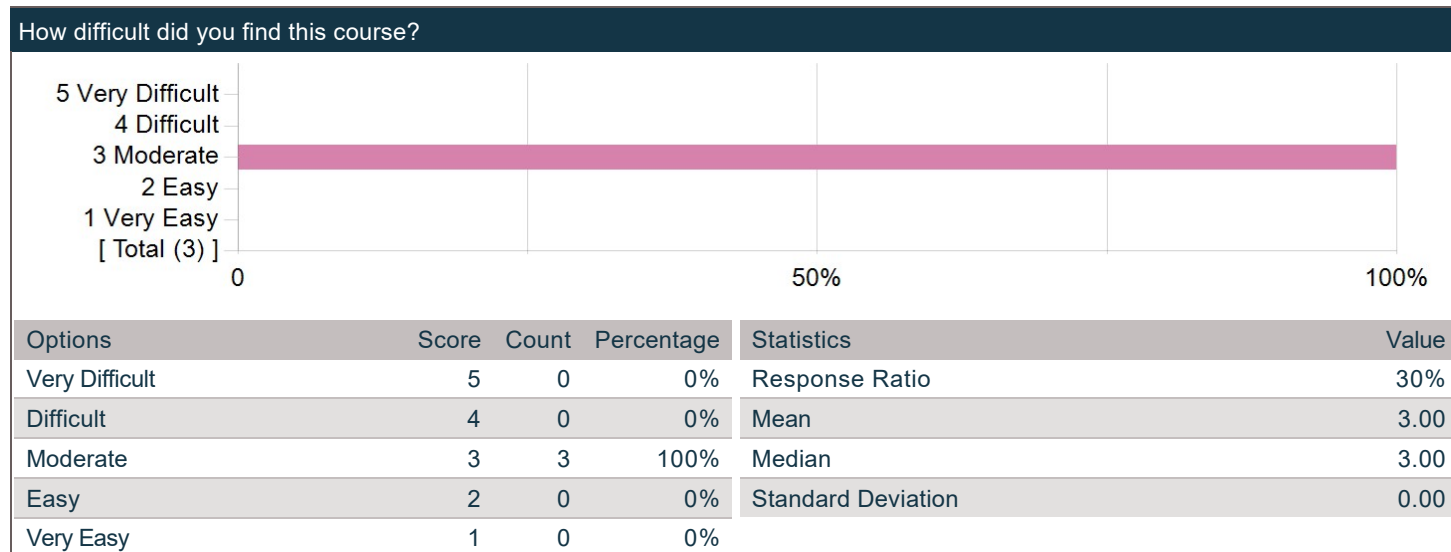
Section component of the course**Requirements - What did this course require of you?**

On average, how many hours per week did you spend on coursework outside of class? Enter a whole number between 0 and 168.

Frequency chart and mean excludes students who answered 31 or more hours.



How difficult did you find this course?

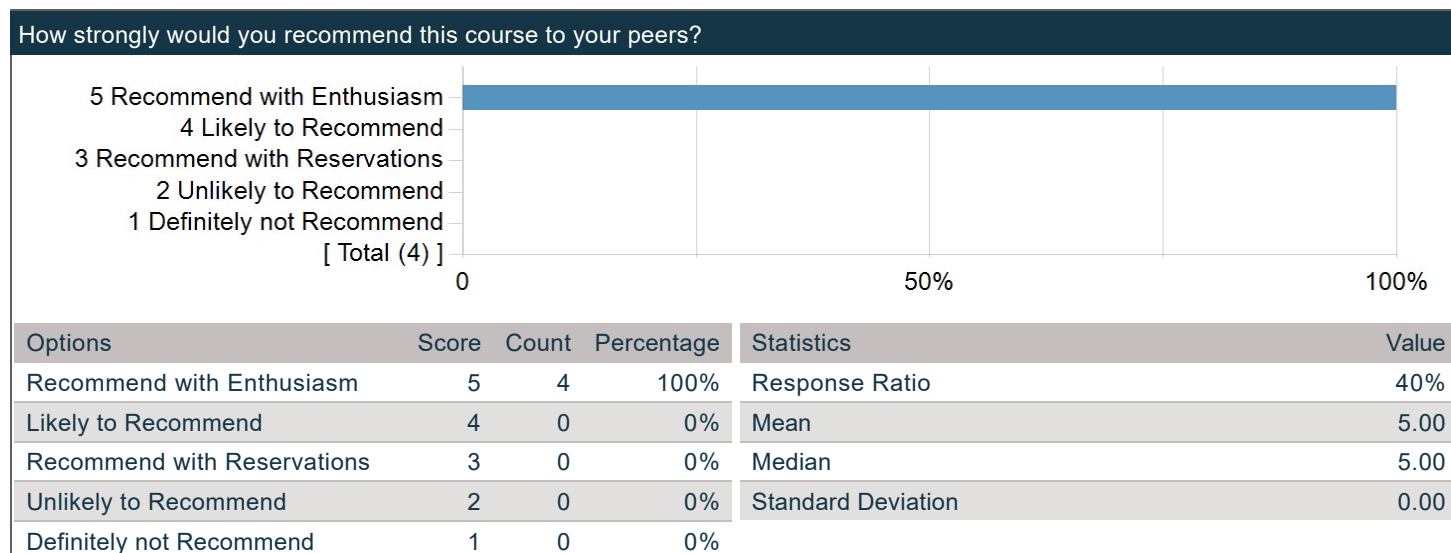


What was/were your reason(s) for enrolling in this course? (Please check all that apply)

Options	Count
Elective	2
Concentration or Department Requirement	2
Secondary Field or Language Citation Requirement	0
Undergraduate General Education Requirement	0
Expository Writing Requirement	0
Foreign Language Requirement	0
Pre-Med Requirement	0
Divisional Distribution Requirement	0
Quantitative Reasoning with Data Requirement	0

Recommendations - Would you recommend this course?

How strongly would you recommend this course to your peers?



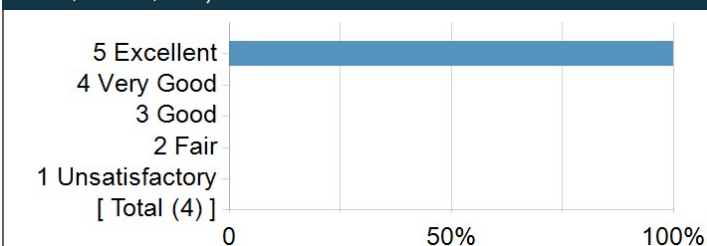
Evaluation of Instructors

General Instructor Questions

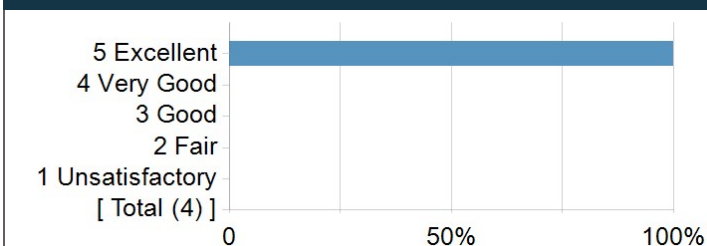
	Count	Excellent	Very Good	Good	Fair	Unsatisfactory	Instructor Mean	Dept Mean	Division Mean
Evaluate your Instructor overall.	4	100%	0%	0%	0%	0%	5.00	4.44	4.41
Gives effective lectures or presentations, if applicable	4	100%	0%	0%	0%	0%	5.00	4.39	4.29
Is accessible outside of class (including after class, office hours, e-mail, etc.)	4	100%	0%	0%	0%	0%	5.00	4.49	4.46
Generates enthusiasm for the subject matter	4	100%	0%	0%	0%	0%	5.00	4.52	4.46
Facilitates discussion and encourages participation	3	100%	0%	0%	0%	0%	5.00	4.53	4.42
Gives useful feedback on assignments	4	100%	0%	0%	0%	0%	5.00	4.45	4.43
Returns assignments in a timely fashion	4	100%	0%	0%	0%	0%	5.00	4.44	4.42

Instructor

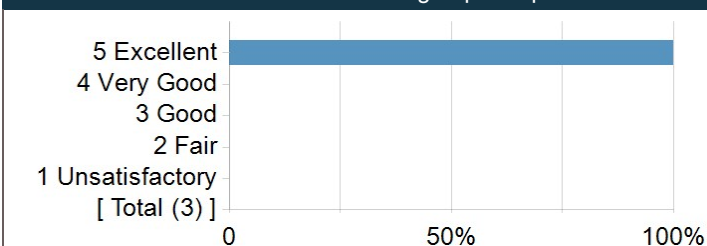
1. Evaluate your Instructor overall.					2. Gives effective lectures or presentations, if applicable				
<div><div>5 Excellent</div><div>4 Very Good</div><div>3 Good</div><div>2 Fair</div><div>1 Unsatisfactory</div><div>[Total (4)]</div><div><div></div><div></div><div></div><div></div><div></div></div><div>050%100%</div></div>					<div><div>5 Excellent</div><div>4 Very Good</div><div>3 Good</div><div>2 Fair</div><div>1 Unsatisfactory</div><div>[Total (4)]</div><div><div></div><div></div><div></div><div></div><div></div></div><div>050%100%</div></div>				
Options	Score	Count	Percentage		Options	Score	Count	Percentage	
Excellent	5	4	100%		Excellent	5	4	100%	
Very Good	4	0	0%		Very Good	4	0	0%	
Good	3	0	0%		Good	3	0	0%	
Fair	2	0	0%		Fair	2	0	0%	
Unsatisfactory	1	0	0%		Unsatisfactory	1	0	0%	
Statistics			Value		Statistics			Value	
Response Ratio			40%		Response Ratio			40%	
Mean			5.00		Mean			5.00	
Median			5.00		Median			5.00	
Standard Deviation			0.00		Standard Deviation			0.00	

3. Is accessible outside of class (including after class, office hours, e-mail, etc.)

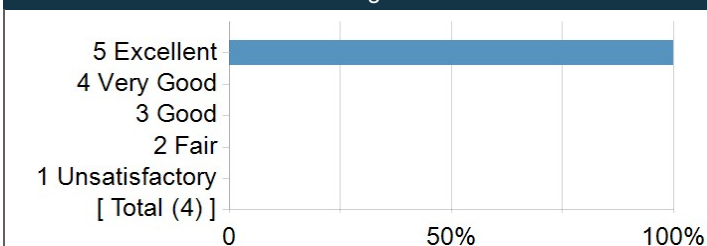
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Fair	2	0	0%
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Mean			5.00
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Standard Deviation			0.00

4. Generates enthusiasm for the subject matter

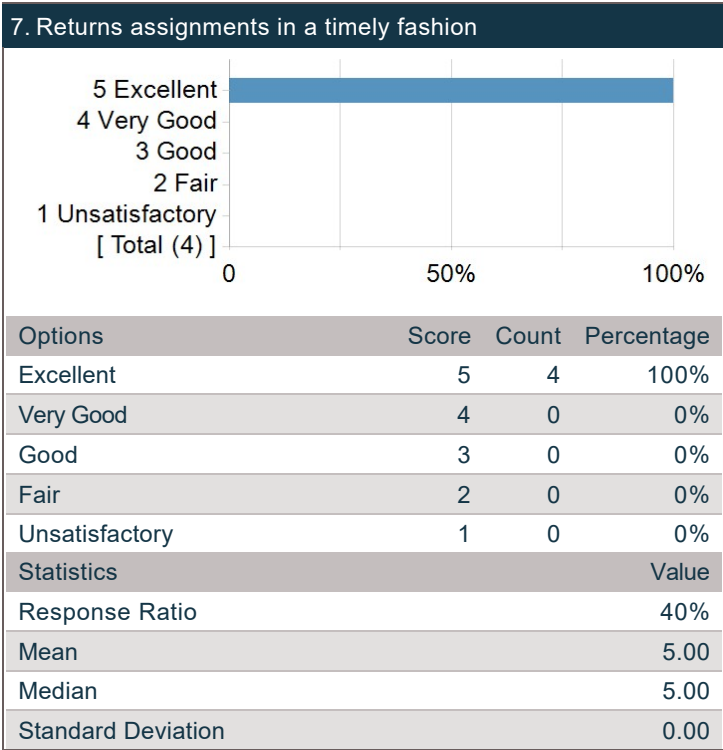
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Standard Deviation			0.00

5. Facilitates discussion and encourages participation

Options	Score	Count	Percentage
Excellent	5	3	100%
Very Good	4	0	0%
Good	3	0	0%
Fair	2	0	0%
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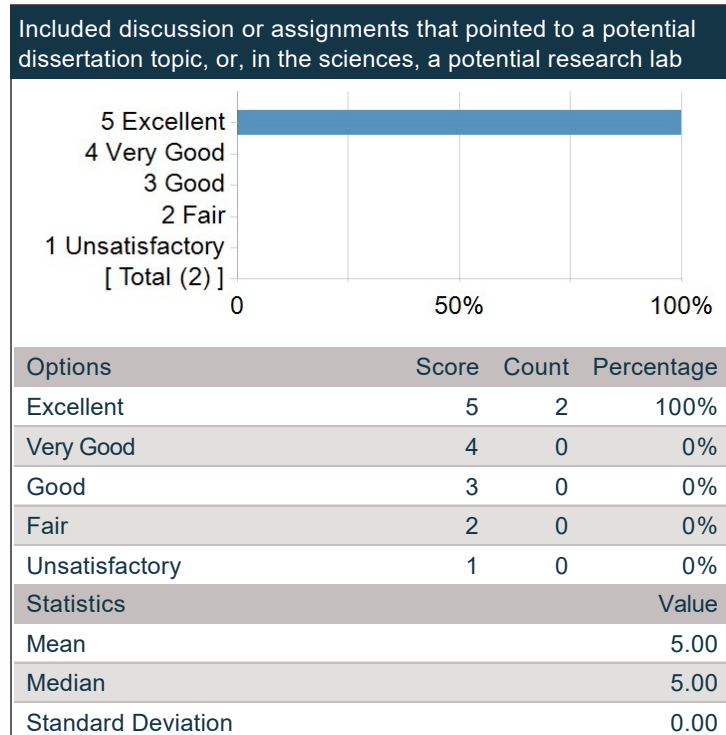
6. Gives useful feedback on assignments

Options	Score	Count	Percentage
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Very Good	4	0	0%
Good	3	0	0%
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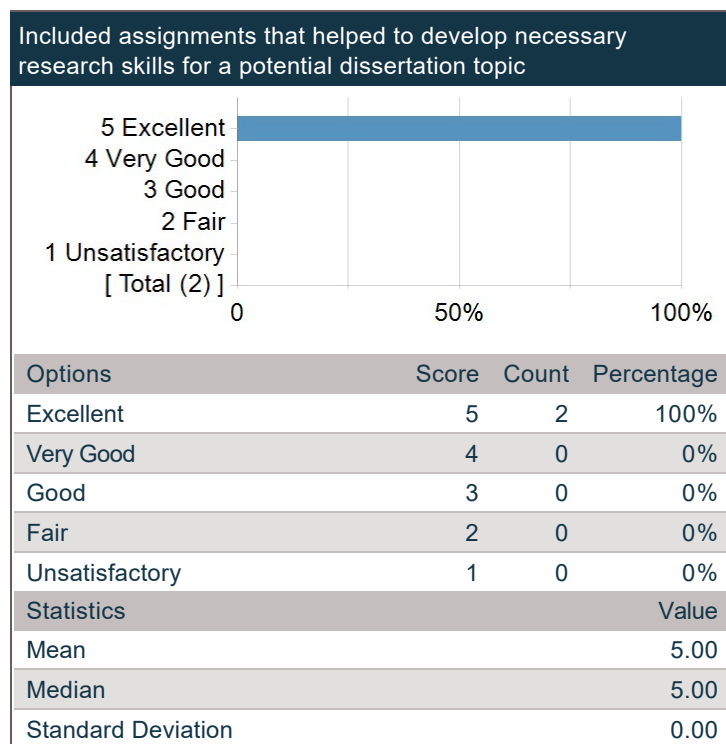


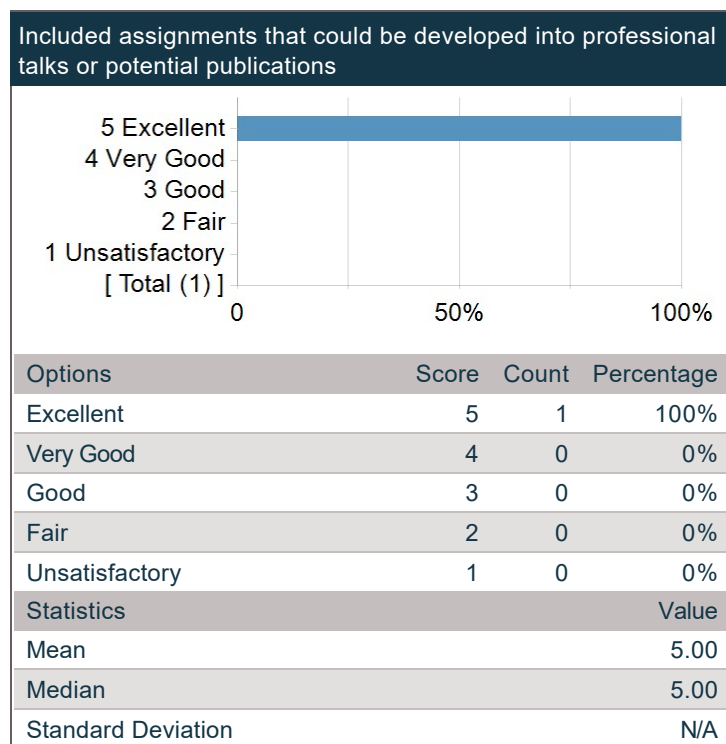
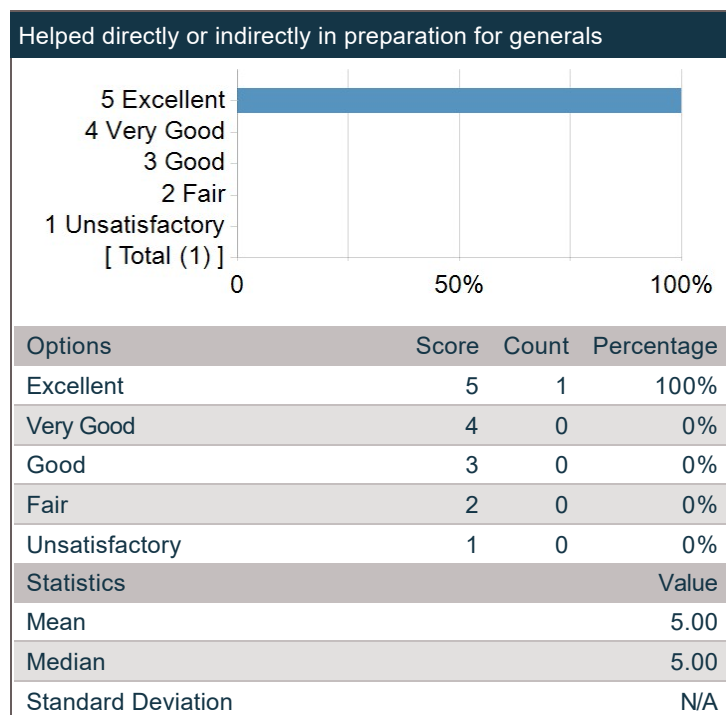
GSAS Module Questions

Included discussion or assignments that pointed to a potential dissertation topic, or, in the sciences, a potential research lab



Included assignments that helped to develop necessary research skills for a potential dissertation topic



Included assignments that could be developed into professional talks or potential publications**Helped directly or indirectly in preparation for generals**

General Course Questions - Comments

What were the strengths of this course? Please be specific and use concrete examples where possible.

Comments
The course did a great job rigorously introducing the mathematical concepts from general relativity. Lectures were engaging and the HW assignments did a great job at supplementing the ideas in class by focusing more on applications/reinforcing connections between ideas. The final project

How could this course be improved? Please use concrete examples where possible and provide constructive suggestions.

Comments
It would have been nice to be able to spend a bit more time on the final topics (e.g. black hole solutions), for which it might've been possible to slim down some of the earlier material that was less on semi-Riemannian geometry and more on general differential geometry (and perhaps make a first HW assignment to recap these ideas in differential geometry without needing to spend time in class on it)

Requirements Comments - What did this course require of you?

In your opinion, what preparation or background is necessary to take this course?

Comments
Definitely algebra, topology, and at least a course on theoretical physics. Differential geometry and a previous course on GR not required but are helpful to enrich the experience of this class.
Math 136 should be reasonable background, though there will likely be the occasional reference to material that is only first seen in Math 230A or another 200's level course. That said, it is usually not critical to understanding the rest of the material (and if it is, it can usually be explained pretty quickly)

Recommendations Comments - Would you recommend this course?

What did you take away from your experience in this course? What did you learn? How did this course change you?

Comments
This course has made me very excited about mathematical relativity, and has furthered my interest in the overlap between mathematics (in particular diff. geo.) and physics. It provided a solid, rigorous approach to the theory of general relativity as compared to some iterations of the Physics Department's iteration of the course. It also tended to focus more on developing the mathematical tools for GR rather than particular solutions to equations, which is quite nice for being able to go out and immediately apply the material to problems.

What would you like to tell future students about this class? (Your response to this question may be published anonymously.)

Comments
This class was the highlight of my semester, and I highly recommend taking it, especially if Puskar is teaching. It was never too stressful, but I learned a ton and it greatly supplemented the other GR material that I had seen. I can't sing praises for this class or for Puskar enough, but it truly was a great experience.

Instructor Comments

Please comment on this person's teaching. (Your response to this question may be published anonymously.)

Comments
Puskar is a great instructor. He teaches the material with enthusiasm and encourages participation. He is also very responsive when it comes to homework questions.
Puskar has been a great teacher – he's always willing to help explain ideas to clear up confusion and wants to make this class as great as it can be. He is a lot of fun in class, and is great at making sure that everyone is following the material being covered.