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9500 GILMAN DRIVE
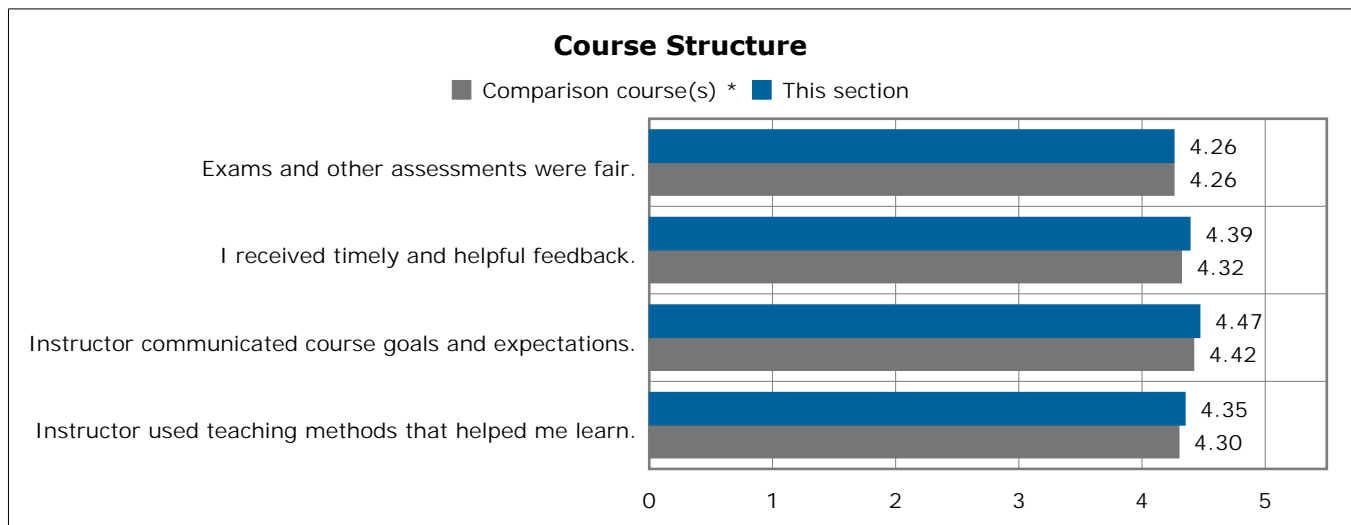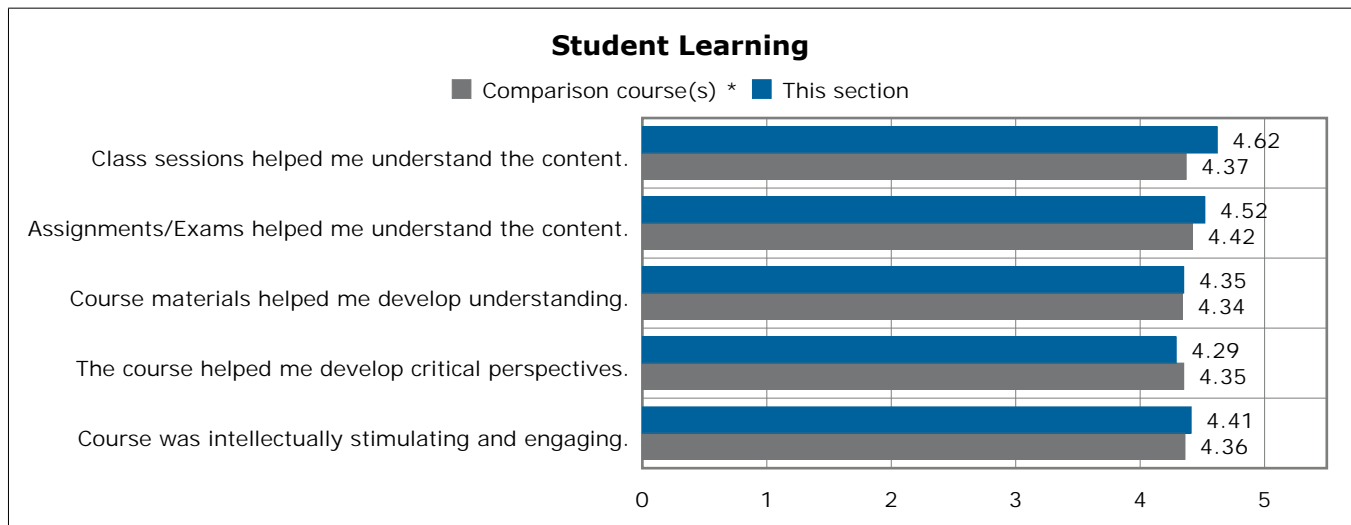LA JOLLA, CALIFORNIA 92093-0348

Graduate Course Student Evaluation of Teaching for Rahul Parhi

ECE 251C - Filter Banks and Wavelets (Parhi, Rahul)
Fall 2024

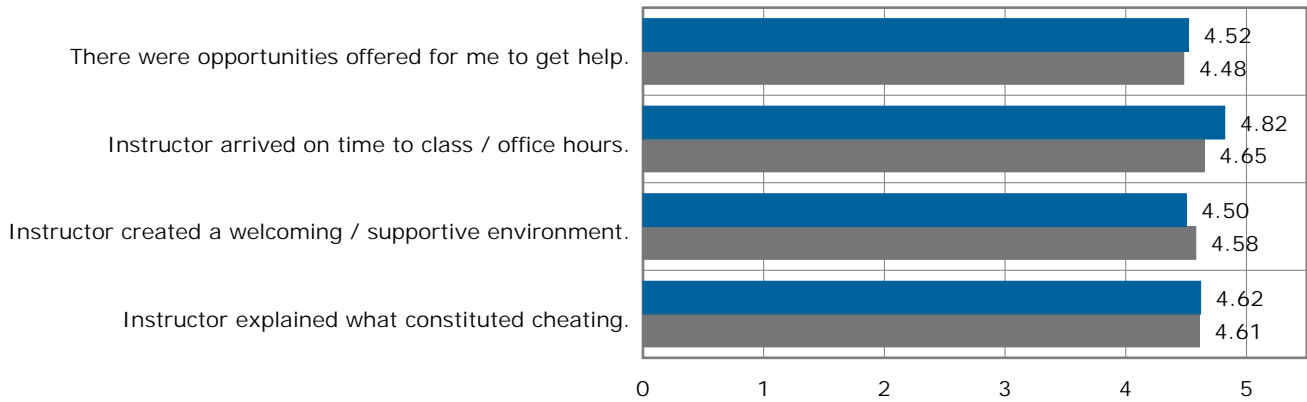Number of Evaluations Submitted: 34
Number of Students Enrolled: 45

Summary Results

Student Learning

Comparison course(s) * ■ This section

Question	This section	Comparison course(s) *
Class sessions helped me understand the content.	4.62	4.37
Assignments/Exams helped me understand the content.	4.52	4.42
Course materials helped me develop understanding.	4.35	4.34
The course helped me develop critical perspectives.	4.29	4.35
Course was intellectually stimulating and engaging.	4.41	4.36

Course Structure

Comparison course(s) * ■ This section

Question	This section	Comparison course(s) *
Exams and other assessments were fair.	4.26	4.26
I received timely and helpful feedback.	4.39	4.32
Instructor communicated course goals and expectations.	4.47	4.42
Instructor used teaching methods that helped me learn.	4.35	4.30

* Comparison courses used: All Electrical and Computer Engineering Fall 2024 GR courses

Class Environment

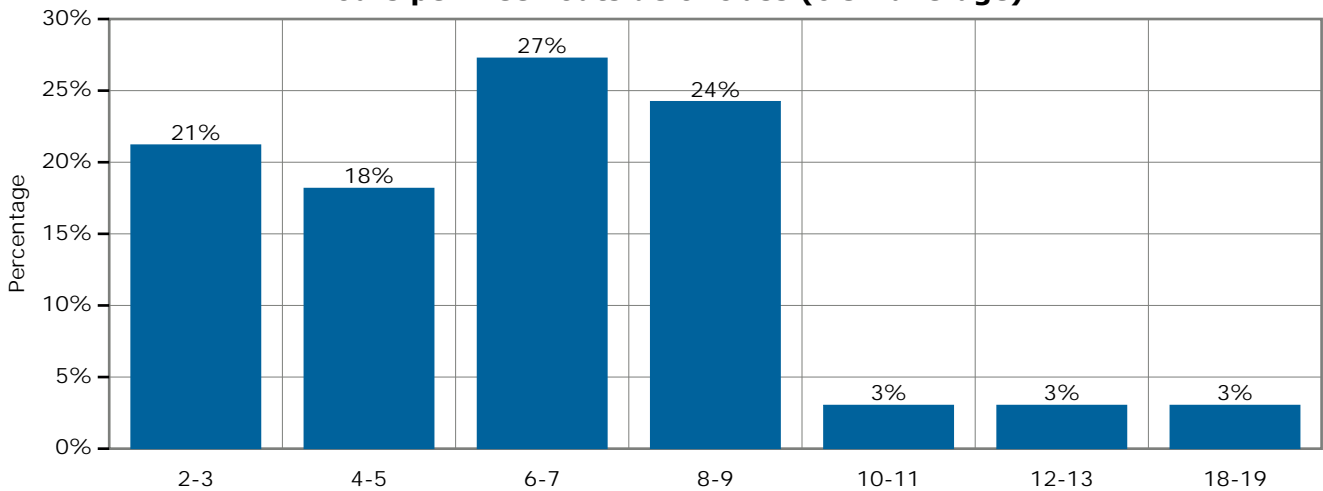Legend: Comparison course(s) * ■ (gray) | This section ■ (blue)

Question	This section	Comparison course(s) *
There were opportunities offered for me to get help.	4.52	4.48
Instructor arrived on time to class / office hours.	4.82	4.65
Instructor created a welcoming / supportive environment.	4.50	4.58
Instructor explained what constituted cheating.	4.62	4.61

(Scale 0 to 5)

Expected Grade (B+ average, 3.68) vs. Grade Received: (B+ average, 3.52)

Legend: ■ Expected | ■ Received

Grade	Expected	Received
A	71%	57%
B	26%	39%
C	3%	2%
D	0%	0%
F	0%	0%
P	0%	0%
NP	0%	0%

Percentage (y-axis: 0% to 80%)
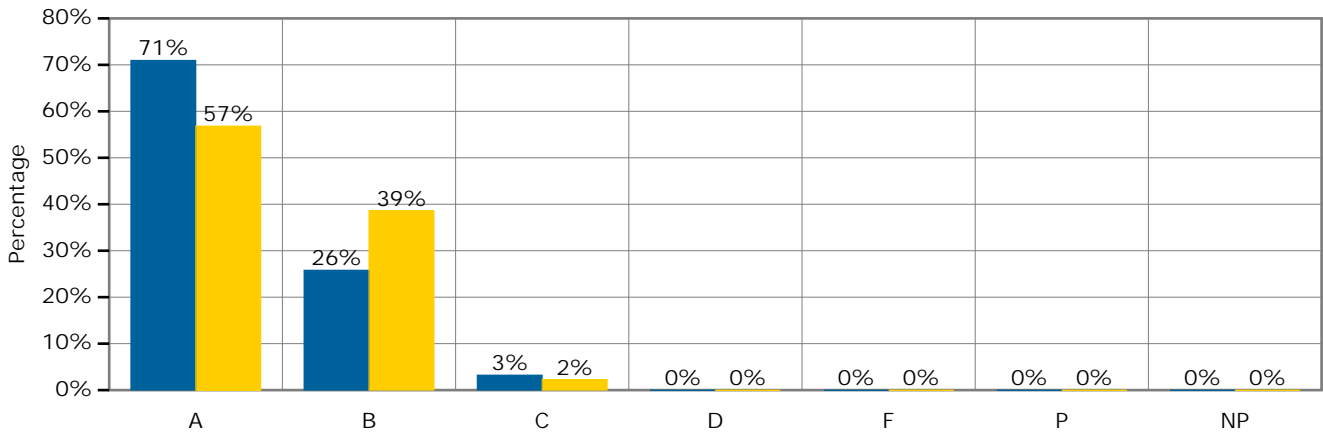
Hours per week outside of class (6.94 average)

Hours	Percentage
2-3	21%
4-5	18%
6-7	27%
8-9	24%
10-11	3%
12-13	3%
18-19	3%

Percentage (y-axis: 0% to 30%)

Full Results

Student Learning

1. Class sessions helped me understand the course content.

23 (67.6%):	Strongly Agree
9 (26.5%):	Agree
2 (5.9%):	Neither Agree Nor Disagree
0 (0.0%):	Disagree
0 (0.0%):	Strongly Disagree
0 (0.0%):	Not Applicable

2. Assignments (homework, projects, etc.) helped me understand the course content.

20 (58.8%):	Strongly Agree
10 (29.4%):	Agree
3 (8.8%):	Neither Agree Nor Disagree
0 (0.0%):	Disagree
0 (0.0%):	Strongly Disagree
1 (2.9%):	Not Applicable

3. Course readings and other course materials helped me develop a thorough understanding of course concepts.

15 (44.1%):	Strongly Agree
16 (47.1%):	Agree
3 (8.8%):	Neither Agree Nor Disagree
0 (0.0%):	Disagree
0 (0.0%):	Strongly Disagree
0 (0.0%):	Not Applicable

4. The course helped me develop my own critical perspectives on the topic.

18 (52.9%):	Strongly Agree
9 (26.5%):	Agree
6 (17.6%):	Neither Agree Nor Disagree
1 (2.9%):	Disagree
0 (0.0%):	Strongly Disagree
0 (0.0%):	Not Applicable

5. The course was intellectually stimulating and engaging.

19 (55.9%):   Strongly Agree
11 (32.4%):   Agree
3 (8.8%):   Neither Agree Nor Disagree
1 (2.9%):   Disagree
0 (0.0%):   Strongly Disagree
0 (0.0%):   Not Applicable

Course Structure

6. Exams and other assessments (essays, projects, etc.) were a fair measure of course learning outcomes.

16 (47.1%):   Strongly Agree
13 (38.2%):   Agree
4 (11.8%):   Neither Agree Nor Disagree
0 (0.0%):   Disagree
1 (2.9%):   Strongly Disagree
0 (0.0%):   Not Applicable

7. I received timely and helpful feedback in this course.

18 (52.9%):   Strongly Agree
11 (32.4%):   Agree
3 (8.8%):   Neither Agree Nor Disagree
1 (2.9%):   Disagree
0 (0.0%):   Strongly Disagree
1 (2.9%):   Not Applicable

8. The instructor effectively communicated course goals, learning outcomes, and expectations.

20 (58.8%):   Strongly Agree
10 (29.4%):   Agree
4 (11.8%):   Neither Agree Nor Disagree
0 (0.0%):   Disagree
0 (0.0%):   Strongly Disagree
0 (0.0%):   Not Applicable

9. The instructor incorporated teaching methods that helped me learn.

17 (50.0%):   Strongly Agree
12 (35.3%):   Agree
5 (14.7%):   Neither Agree Nor Disagree
0 (0.0%):   Disagree
0 (0.0%):   Strongly Disagree
0 (0.0%):   Not Applicable

Class Environment

10. There were opportunities offered for me to get help when needed (e.g. established office hours, discussion section, discussion board, etc.).

19 (55.9%):   Strongly Agree
12 (35.3%):   Agree
2 (5.9%):   Neither Agree Nor Disagree
0 (0.0%):   Disagree
0 (0.0%):   Strongly Disagree
1 (2.9%):   Not Applicable

11. The instructor arrived on time to class sessions and office hours.

29 (85.3%):   Strongly Agree
4 (11.8%):   Agree
1 (2.9%):   Neither Agree Nor Disagree
0 (0.0%):   Disagree
0 (0.0%):   Strongly Disagree
0 (0.0%):   Not Applicable

12. The instructor created a welcoming and supportive learning environment that valued and supported equity, diversity, and inclusion.

21 (61.8%):   Strongly Agree
10 (29.4%):   Agree
2 (5.9%):   Neither Agree Nor Disagree
1 (2.9%):   Disagree
0 (0.0%):   Strongly Disagree
0 (0.0%):   Not Applicable

13. The instructor explained what constituted cheating in this course and emphasized the importance of academic integrity.

22 (64.7%):   Strongly Agree
11 (32.4%):   Agree
1 (2.9%):   Neither Agree Nor Disagree
0 (0.0%):   Disagree
0 (0.0%):   Strongly Disagree
0 (0.0%):   Not Applicable

Please describe any specific aspects of the course and/or teaching practices that your instructor used that...

14. Please describe any specific aspects of the course and/or teaching practices that your instructor used that created or interfered with a welcoming and supportive learning environment that valued and supported equity, diversity and inclusion.

- -

- Cleared everyone doubt in class and set a strong base for his course at the beginning so it will be easy for everyone with different backgrounds to follow.

- emphasize the importance of academic integrity everytime

- Rahul is always friendly to students and open to their questions, in and out of class.

- The instructor was very welcoming and happily took questions during the class even if sometimes the flow of the lecture would get impeded -- this was actually very supportive and inclusive as the instructor demonstrate that he cared whether students were engaged and following along.

- Very accessible and open to discussion, be that in class or in office hours

15. Please describe any specific aspects of the course and/or teaching practices that your instructor used that particularly helped you to learn the material and/or develop your own critical perspectives on the material.

- -

- Gave plenty of examples of things during the class that helped support understanding of the material.

- His notes were truly helpful in understanding the content well.

- I like how the professor provided a lot of mathematical and theoretical reasoning behind concepts, which helped me understand the material from a deeper level.

- I think the class format of using a whiteboard was especially helpful. Usually with slides classes progress so fast that the concepts can be hard to grasp. But writing things out helped pace the topics and made it easier to follow and try to understand. Also knowing that lecture notes will be shared after class was super helpful -- this allowed me to sometimes slow down and just try to

understand the concepts on the board, instead of trying to quickly copy down everything even if I wasn't following along.

- The heavy weightage on the project incentivized me to look into wavelets beyond what was taught in class, and to place wavelets within a broader data processing pipeline.

- the lecture note is very clear but sometimes it is hard to tell what word it is

- The project for the course was a nice way for us to get experience in the field of wavelets. Class is also very active with Rahul often asking questions of the class to keep us engaged.

- Your office hours were very helpful to me.

16. Please describe any specific aspects of the course and/or teaching practices that your instructor used that helped you to feel engaged with the course material or that encouraged you to feel that you could succeed in the course.

- -

- attending classes ensures you do well in the course as professor teaches everything needed in class.

- I liked the additional resources (papers, links etc) that were shared for anyone interested in a reading about certain advanced topics.

- I think the instructor clearly demonstrated that they cared about pedagogy and that we take something useful from the class. There was even a point in the class where popular vote decided whether we would go more into wavelets and filterbanks (luckily wavelets won!) but overall this made the class one of the coolest classes I have ever attended. Also, giving us some time to think about a problem before the instructor solved it was also super helpful -- it gave us a chance to try re-discovering even a result from Euler himself at one point! Also knowing that the instructor was only a piazza post away for answering questions was very encouraging.

- introduce many application of related areas in class

- Professor Parhi is very nice and answers questions happily, which encourages me to ask questions and not worry about it being a dumb question.

- Rahul does well keeping the class interactive by giving us moments to work out class material on our own before coming back to the lecture.

17. Please describe any specific aspects of the course and/or teaching practices that your instructor used that were less helpful for your learning. Optionally you may offer constructive suggestions that might improve their effectiveness.

- Having a reference textbook was nice, but differences in notation/material in class and textbook could be confusing at times

- hope there could be the recording of the lectures

- I am a little on the fence about making purely algebraic manipulations an integral part of class time. On one side, I feel that algebra can be appendix'd, and the time could be reallocated to discussing / visualizing what the results mean. But then I would probably never look at the

appendix. Still, I am more in the camp for trying to do everything geometrically, but geometric operations are not as straightforward in the pole-zero domain as algebraic manipulation is, for e.g., when we had to factor transfer functions into A / B terms.

- I think Professor Parhi can maybe slow down just a bit during lectures. I understand it might not be his fault, there's just too much material to cover. But I often felt rushed and before I could understand something, we were already on the next topic. It was hard to formulate questions during class because of the fast pace as well.

- The class was super fast. This isn't easy to remedy, but I think the class could be stretched out to the last week of the quarter. Currently the last two class sessions aren't used for lecture, and our presentations for the class could be moved to the date/time of our final exam. So if the class is stretched to use those last two sessions, it might be better paced.

- the textbook is hard to understand and i find some questions in the homework is confusing

Additional Feedback

18. Is there anything else you would like to share about your experience in the course?

- -

- I hope the instructor could provide the slide or the note before every class cause sometimes I cannot understand what the characters on the board, which made me spent much more time on this course than it should be.

- I personally enjoy that Rahul had notes prepared before hand that he would write on the board during class, and then posted on canvas later. I was able to follow material easily this way.

  Rahul is also very friendly, and asking him questions about course content feels easy and leaves me with satisfying answers. He has realistic office hours, but honestly If possible I wish he had more office hours throughout the week (maybe two days a week) since I had a scheduling conflict with his normal OH time.

- I really liked this course, it was definitely all new information from the undergrad courses, which focused mainly on Fourier things in signal processing. This opened up my perspective in the signal/image processing field.

- I wish there was a final exam as well, especially since I do not do well in the midterms. Midterms are usually way more time-crunched in terms of the studying for them, while I usually have more time to re-assimilate materials for final exams.

- maybe next time the project proposal could start earlier? i find the time is not enough to finish the content of the project

- Overall enjoyed taking this course. Its HW, project and exam everything ensured fair assessment and learning for the course.

- The course was thorough and in depth. Thank you!

- The handwritten notes were concise and helpful, but having the lectures recorded would have been a plus (especially while revising for the midterm).

- The professor was good at teaching, but sometimes lectures were too fast.

- This was one of the best courses I have ever taken. I really appreciate the time and energy professor Rahul put into making this course a merger of analog wavelet theory and digital filterbanks. I hope this course will eventually grow into the standard reference for how wavelets should be taught to engineers. And I really hope there will be a follow-up course on the continuous wavelet transform and redundant basis!

Student Participation

19. What was/were your reason(s) for taking this course?

27 (69.2%):	Major/Program Requirement
0 (0.0%):	Minor
0 (0.0%):	College General Education
6 (15.4%):	Elective
6 (15.4%):	Interest
0 (0.0%):	American History and Institutions (AHI) Requirement
0 (0.0%):	Undergraduate Diversity, Equity and Inclusion Requirement (DEI) Requirement
0 (0.0%):	Jane Teranes Climate Change Education Requirement (JTCCER)

20. How often did you attend class and/or engage with course materials?

18 (54.5%):	Always
13 (39.4%):	Usually
1 (3.0%):	Sometimes
1 (3.0%):	Seldom
0 (0.0%):	Never
1:	[No Response]

21. Hours per week of work outside of class

0 (0.0%):	0-1
7 (21.2%):	2-3
6 (18.2%):	4-5
9 (27.3%):	6-7
8 (24.2%):	8-9
1 (3.0%):	10-11
1 (3.0%):	12-13
0 (0.0%):	14-15
0 (0.0%):	16-17
1 (3.0%):	18-19
0 (0.0%):	20 or more
1:	[No Response]

22. Expected grade in the course

22 (71.0%):	A
8 (25.8%):	B
1 (3.2%):	C
0 (0.0%):	D
0 (0.0%):	F
0 (0.0%):	P
0 (0.0%):	NP
3:	[No Response]