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Graduate Course Evaluation for Jun-Kun Wang Department of Electrical and Computer Engineering

ECE 273 - Convex Optimization & Apps Section ID 430352 Section Number A00 Spring 2024

Number of Evaluations Submitted: 17 Number of Students Enrolled: 40

- 1. What is your reason for taking this class?
- 2 (11.8%): Core Course Requirement
- 5 (29.4%): Subject Area Requirement
- 3 (17.6%): Elective
- 7 (41.2%): Interest

2. The Instructor was clear about course expectations.

- 13 (76.5%): Strongly Agree
- 4 (23.5%): Agree
- 0 (0.0%): Neither Agree Nor Disagree
- 0 (0.0%): Disagree
- 0 (0.0%): Strongly Disagree

3. The Instructor was well-prepared for class.

- 12 (70.6%): Strongly Agree
- 5 (29.4%): Agree
- 0 (0.0%): Neither Agree Nor Disagree
- 0 (0.0%): Disagree
- 0 (0.0%): Strongly Disagree



4. The Instructor organized class activities in a way that promoted learning.

- 10 (58.8%):
 Strongly Agree

 6 (35.3%):
 Agree

 1 (5.9%):
 Neither Agree Nor Disagree

 0 (0.0%):
 Disagree

 0 (0.0%):
 Strongly Disagree
- 5. The Instructor promoted and encouraged questions and discussion.
- 15 (88.2%):
 Strongly Agree

 2 (11.8%):
 Agree

 0 (0.0%):
 Neither Agree Nor Disagree

 0 (0.0%):
 Disagree

 0 (0.0%):
 Strongly Disagree
- 6. The Instructor provided feedback (written/oral) in a way that promoted learning.
- 13 (76.5%):
 Strongly Agree

 4 (23.5%):
 Agree

 0 (0.0%):
 Neither Agree Nor Disagree

 0 (0.0%):
 Disagree

 0 (0.0%):
 Strongly Disagree
- 7. The Instructor was accessible to students outside of class (office hours, e-mail, etc.).
- 15 (88.2%): Strongly Agree
- 2 (11.8%): Agree
- 0 (0.0%): Neither Agree Nor Disagree
- 0 (0.0%): Disagree
- 0 (0.0%): Strongly Disagree

8. I would recommend this instructor overall.

- 10 (58.8%): Strongly Agree
- 6 (35.3%): Agree
- 1 (5.9%): Neither Agree Nor Disagree
- 0 (0.0%): Disagree
- 0 (0.0%): Strongly Disagree

9. What is your overall rating of the Instructor?

- 11 (64.7%): Excellent 3 (17.6%): Above Average
- 3 (17.6%): Average
- 0 (0.0%): Below Average
- 0 (0.0%): Poor

10. General comments about the Instructor's performance *Please keep your comments constructive and professional, abiding by the Principles of Community*

- /
- Although this course was offered for the first time by Prof. Wang, he has done a great job! I thoroughly enjoyed learning the material and working on homework problems.
- I like how prof Wang encourages class participation and makes the class interactive. Really helpful in office hours too and answers everything well on Piazza.
- I think Professor Wang is knowledgeable and of great character and did his best in coming to class well prepared. However, I feel like the lecture style was a little disorganized and often it felt like the motivation/bigger picture behind some of the math we were doing wasn't there. For example, the duality section I felt like the explanation on wikipedia help me get a better idea of working in the dual space, how the spaces were related etc. than class did. I think more time spent motivating why we are doing the things and maybe less theorems that seemed a little less magical could make the class much easier to follow.
- Professor Wang answers every student's questions patiently and clarifies doubts both in class and during office hours. The lecture slides are very organized and easy to follow.
- The instructor was very enthusiastic in class about the material and did a good job showcasing why certain algorithms worked better than others and what scenarios to implement certain algorithms or ideas.
- The professor is very very good. He teaches the subject very well, and has planned the course content in a way that facilitates learning.
 He is also super nice, always listens to questions, and never shies from answering any.
 He is also one of the Professor who most engages with the class and on Piazza forum.
- 11. I would recommend this course overall.
- 10 (58.8%): Strongly Agree
- 6 (35.3%): Agree
- 1 (5.9%): Neither Agree Nor Disagree
- 0 (0.0%): Disagree
- 0 (0.0%): Strongly Disagree

12. What is your overall rating of this course?

10 (58.8%):	Excellent
3 (17.6%):	Above Average
4 (23.5%):	Average
0 (0.0%):	Below Average
0 (0.0%):	Poor

13. What were the particular strengths of this course?

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- 1) Introduction to convergence and complexity analysis of first-order methods.
 2) Introduction to several algorithms.
- Strong theoretical foundations in convex optimization, rigorous derivations and proofs done in class, scribing to ensure students learn the material well
- The biggest strength of the course is the Professor himself and the organization of the course from the content, to the assignments, to the midterm, and the final project. Planned to perfection and well suited for students in a hectic quarter system.
- The scribes from the classmates were very helpful. The homework problems improve our understanding of the materials.
- The strength of the course was the homework. While they seemed random at first they were all used to prove different things we previously covered or would later cover.

14. What suggestions do you have for making this course more effective?

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- Close to none. If I have to nitpick, it will be to add a graphical perspective to the teaching where possible.
- I felt the order in which the topics were covered was not logical. Lagrangian, and all the duality theory could have been covered after introducing the constrained optimization topic and before discussing the algorithms. After that, the algorithms - PGD, Frank-Wolfe, and mirror descent could have been covered since they all fall in the same category of constrained optimization. SGD and SVRG could have been covered after the constrained optimization algorithms.

Also, maybe this course can be split into a two-quarter series. This would ensure sufficient time is spent on important topics.

- I think there was a lot to teach in the class, and because some ideas weren't covered enough for me to completely understand. But office hours helped to mitigate this.
- Slides could be better structured and pedagogically clearer. Pre-reading might be helpful. Also, I think we should get more time for the midterm, and I'd prefer the midterm happening earlier (or two midterms).
- The midterm exam was super hard as we didn't have enough time to finish. Might have been

easier if we had smaller quizzes spread out throughout the quarter instead of one big midterm in week 8.

15. What one concept did you take from this class that will shape your future?

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- 1) Duality theory, 2) Convex optimization can be formulated as min-max problems!
- convexity and smoothness
- Duality theory and its applications in algorithms such as stochastic dual coordinate ascent
- One concept I will take from this class is Dual theory, and solving the dual problem by taking the Lagrangian and and using the KKT conditions to solve optimization problems
- That math is important, and it can be simple when taught by someone who cares and structures content to make it simple

16. Do you have any other comments to add to your evaluation? *Please keep your comments constructive and professional, abiding by the Principles of Community*

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• I enjoyed the course a lot Professor. Thank you so much for it! :) This has been the math course I've enjoyed most in UCSD and maybe even since my undergrad.

Thank you!

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