

Report of the Primary Unit Evaluation Committee for the Promotion of Dr. Patrick Newberry Assistant Teaching Professor, Department of Mathematics



September 5, 2024

Dr. Patrick Newberry is being considered for promotion as Associate Teaching Professor, in the Department of Mathematics. We, the Primary Unit Evaluation Committee for this promotion case, have completed our review of Dr. Newberry's dossier, and present our findings and our recommendation here.

Dr. Newberry received his Ph.D in Mathematics from the University of Colorado Boulder in August 2012. Over the course of his graduate studies, he taught a number of courses for the Math department, as our graduate students typically do. Since then, he has continued to teach Math courses on our campus – first as an Instructor (August 2012 – May 2014) in the Department of Mathematics, and later as a Lecturer (August 2014 – August 2019), then as an Instructor (August 2019 – August 2021), and then as Assistant Teaching Professor (August 2021 – August 2024) for the ENSRAP (Environment and Natural Sciences Residential Academic Program, also known as the Baker Residential Academic Program). He is hired as an Assistant Teaching Professor (August 2024) in the Department of Mathematics. Due to his long record of excellent teaching, he is up for promotion to Associate Teaching Professor now.

We, the PUEC, find Dr. Newberry's overall record of teaching to be *excellent*, and his overall record of service to be *meritorious or better*. Therefore, in keeping with the "Reappointment and Promotion of Teaching/Clinical Faculty Guidelines" for the College of Arts and Sciences found here

<https://www.colorado.edu/asfacultystaff/personnel/policies-procedures/reappoint-promote-tenure/non-tt/guidelines>

and detailed here

<https://www.colorado.edu/academicaffairs/titles-roles-appointment-evaluation-and-promotion-non-tenure-track-faculty-teaching-and-librarian>,

we recommend Dr. Newberry's promotion, at the rank of Associate Teaching Professor, for a period of three years.

Here we detail the highlights of Dr. Newberry's record, and the reasons for our recommendation.

TEACHING

Since being appointed Assistant Teaching Professor in the ENSRAP in August 2021, Dr. Newberry has primarily taught courses: MATH 1112 Math Analysis in Business (7 classes), MATH 1150 Precalculus (3 classes), MATH 1300 Calculus I (6 classes), MATH 2300 Calculus II (3 classes), MATH 2510 Introduction to Statistics (6 classes), and MATH 3430 Ordinary

Differential Equations (2 classes).

The FCQ format changed substantially between Fall 2020 and Spring 2021: “Instructor Overall” was replaced with 8 more specific questions. Overall, the FCQ data we have to work with is somewhat limited, and difficult to interpret in aggregate. Still, some insights can be gleaned from the information that is available.

FCQ Scores. Dr. Newberry’s FCQ scores have consistently been higher than the department average and in many cases far above. The table below shows his averages **on the questions about the instructor (9-16)**, the department averages, **the difference between his average and the department average**, the standard deviation of the department scores, and the number of standard deviations above the department average achieved by him.

Newberry	Mean	4.72	4.74	4.43	4.75	4.37	4.58	4.83	4.67
Dept	Mean	4.51	4.32	4.13	4.37	3.99	4.16	4.42	4.19
	Delta	0.21	0.42	0.30	0.38	0.39	0.42	0.40	0.49
	SD	0.476	0.545	0.575	0.545	0.737	0.618	0.57	0.655
	#SD	0.451	0.778	0.523	0.706	0.527	0.684	0.706	0.741

In addition, many of Dr. Newberry’s scores were a perfect 5 out of 5. **Dr. Newberry has earned enviable scores, in large part due, as his students repeatedly point out, to his passion for and dedication to teaching.**

Looking at the FCQ scores, his **average instructor ratings** for these courses were between 4.37 and 4.83 (out of 5) respectively. These numbers compare very favorably with the corresponding averages over all sections taught by instructors in the Mathematics Department, in this same time period: these latter averages were between 3.99 and 4.51.

All these data suggest teaching talent and success that are further demonstrated by the other, more qualitative, measures included in the dossier: Dr. Newberry’s teaching statement, classroom observation reports, **solicited student letters**, and various other materials provided by the candidate. Together, these documents show a thoughtful, dedicated, enthusiastic, and energetic teacher who is aware of, and conscientiously incorporates, best practices in pedagogy — particularly active learning paradigms — into his teaching.

One student’s letter was received. It is positive and says:

“I was in his Calculus I & Calculus II class last year. Dr. Newberry is a professor who will go the extra mile to ensure his students understand the material. He explains thoroughly and engages heavily in working through problems with students. My only complaint would be his subpar handwriting.”

The peer observation reports **(6, including a class interview)** on Dr. Newberry’s teaching are uniformly positive. All of them speak to Dr. Newberry’s high degree of preparation and organization, to his enthusiasm, to his clarity, to his rapport with and respect for his students, to his knowledge, and to his dedication. A class interview comment says “(Dr. Newberry is) Passionate and devoted to student success; approachable and explains well.” On the topic of minor quibbles, a class interview comment says “(Dr. Newberry needs) Work on handwriting and writing neater and parallel.” Dr. Newberry should certainly take note of these comments. But these comments are few compared to the preponderance of the evidence, which paints

a very positive picture of Dr. Newberry's teaching.

In sum, the PUEC judges Dr. Newberry's teaching to be excellent. He is innovative, engaged, and engaging. He continually strives to improve his courses and his teaching, through development of new course materials, through application of student-centered teaching practices, and so on.

FCQ Student Comments. Student comments about Dr. Newberry were overwhelmingly praising. The vast majority are very positive, citing his availability to help, his enthusiasm for teaching, and his care for his students. Many also comment that he made math fun. The following are quoted student comments from a wide variety of courses over the last three years:

Fall 2021 MATH 1150

"Great course with and amazing professor, kept everything very organized and easy for students to ask or approach with any questions or concerns they may have had. Teamwork was highly encouraged and multiple methods of learning were applied to every concept we covered, ensuring I left with the best possible understanding of what I learned and why I learned it."

Fall 2022 MATH 1300

"Overall, the course is taught in a very effective way. I took calculus in high school, but I feel with Dr. Newberry as my teacher I understood the concepts a lot better and actually grasped how they all interact together. ... Dr. Newberry did a great job teaching, so much so that I am taking **Cale 2** next semester just so he can teach me again (I do not need it for my degree). My favorite part of the class is how enthusiastic Dr. Newberry is about math, and it makes me want to learn math too."

Fall 2022 MATH 2510

"I loved Professor Newberry. He was one of the best math teachers that I've had. He is always willing to answer questions and is very effective at explaining concepts. I thought stats was going to be my most challenging class but it ended up being my easiest because of Professor Newberry."

Spring 2023 MATH 2300

"Where to start ... Dr. Patrick Thaxton Newberry was the best math teacher I have had and probably will ever have. That is all anyone needs to know"

Fall 2023 MATH 1150

"Professor Newberry is a colossus, a redefinition of teaching technique of unprecedented quality. Learning under him has been a transformative odyssey, marked by enlightenment in both mathematics and quotidian existence, installing in me a profound appreciation for the artistry of education. Within academia's reaches, Professor Newberry is not merely a teacher, he is a maestro of the unprecedented."

Spring 2024 MATH 1112

“Dr. Newberry is probably the best professor I have had during my time at CU. He is knowledgeable, but challenges me the problem solve on my own. He is extremely thorough in the way he teaches and pushes his students to be the best, most hardworking they can be. His dedication to teaching is admirable and I wish I could take another course taught by him! Not being a ”math person,” I went into this course with fear, but this was quickly alleviated by Patrick’s incredible teaching skills. Thank you Patty!”

Spring 2024 MATH 1112

“My favorite class that I have taken so far in college and Patty absolutely killed it as a teacher.”

Spring 2024 MATH 2300

“This is the second class I’ve taken with Doctor Newberry and I have to say that he’s been the best math teacher I’ve ever had. His passion for the subject of calculus shines through in his lessons. He teaches in a style where he gets students to think outside of the box by asking intriguing questions and then thoroughly explains the conceptual aspects of calculus perfectly. His quizzes can get somewhat difficult at times but they prepare us well for the exams. I’ve really enjoyed **Cale 2** and a good portion of that enjoyment is due to Dr. Newberry being a genuinely interesting and engaging instructor.”

While the overwhelming majority of the FCQ comments were very positive, a few did suggest room for improvement.

Fall 2022 MATH 1150

“Sometimes it was hard to read handwriting but I have no complaints. If anything put notifications for web assignments on canvas.”

Fall 2023 MATH 1300

“Moves quickly and writes messily. Best prof ever tho.”

Dr. Newberry’s students appreciate his dedication to their learning and the large amount of effort he puts into teaching well.

SERVICE

The PUEC finds Dr. Newberry’s service record to be *meritorious or better*. Dr. Newberry has provided, and continues to provide, a large amount of service to the Department of Mathematics and the ENSRAP.

He personally welcomes incoming students and their families at several events hosted by the RAP. He attends the weekly coffee hour, conversing with students about all aspects of university life. From his service statement,

“At the beginning of the year, I led students in an extracurricular activity, Gyotaku, the Japanese Art of painting with fish. This highly unique experience was wonderful to share with the students. I helped them open up to new experiences, get out of their comfort zone, and bond with new classmates as they start their college journey. I also served as a mathematics resource to other faculty and their students, including giving math-specific advising, and assistance to other courses. I have also this year assisted two RAP student

coordinators in their statistical work and R.”

Dr. Newberry’s service is not limited to the RAP. He collaborates often with the Mathematics Department, attending weekly meetings for the courses that parallel those he teaches for the RAP, lending expertise in pedagogy, assessment design, and catching violations of the Honor Code. He has written LaTeX code that allows the Department to give many versions of the same exam, saving the instructors a large amount of time and effort. He has also written a grading script for MATH1212: Data and Models, a class he does not teach. He has been supervising UCAs (Undergraduate Course Assistants) for Math 2510, which serve a similar role to Learning Assistants. He also maintains the spreadsheet calculator and problem database for MATH 2510: Introduction to Statistics, a course Dr. Newberry helped develop. He is currently developing the materials and structure to have UCAs in Math 1112, and will be managing them starting Fall 2024. In Spring 2023 he served on a PUEC for a faculty member in the Student Academic Success Center. In Spring 2024 he also collaborated with Ally Graf to present in the Seminar for Undergraduate Mathematical Education. He facilitated and contributed to community building activities in Baker RAP Fall 2014 – May 2024.

While much of his service is to the ENSRAP and the Mathematics Department, Dr. Newberry also volunteers for his local middle school. At Hulstrom K-8, he offers study sessions for the Mathletes, helps organize and create preparation materials for their meetings, and supports the Mathcounts coach to prepare students for the State competition and has offered study sessions for students. Separate from Mathcounts, he also gives talks about infinity and game theory to middle school math classes, to help encourage interest in higher-level mathematics.

Dr. Newberry’s service is of great value to the RAP, the Mathematics Department, and the university (the courses he teaches are all service courses), and to our community as a whole.

SUMMARY

The PUEC unanimously finds Dr. Newberry’s teaching to be *excellent*, and his service record to be *meritorious or better*. He is a great asset to the Department of Mathematics, and through his service and his effective teaching of service courses, is an asset to our campus as a whole. We strongly recommend his promotion, to the level of Associate Teaching Professor, for a period of three years.

Sincerely Yours,

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