Sean McAfee

Curriculum Vitae

Education

2012–2019	**University of Utah**, *PhD, Mathematics, Representation Theory of Lie Groups*.
2008-2012	**University of Illinois in Chicago**, *BS, Mathematics*.

Teaching Experience

I have nearly ten years of experience teaching a broad variety of subjects, as well as experience coordinating large multi-section classes both in-person and remotely.

2020-present: Instructor, Evanston Township High School

Advanced Topics in Math, Foundations of Mathematics:
Fall 2020, Fall 2021

Advanced Topics in Math, Number Theory:
Spring 2021, Spring 2022 (planned)

2019-present: Postdoctoral Lecturer, Northwestern University

Integrated Precalculus and Differential Calculus: *Winter 2020 (Course Coordinator for 4 sections, 80 students)*

Integrated Precalculus and Integral Calculus: *Spring 2020, Spring 2021*

Differential Calculus: *Summer 2020, Fall 2020 (Course Coordinator for 10 sections, 450 students), Summer 2021*

Integral Calculus: *Winter 2020, Spring 2020 (Course Coordinator for 4 sections, 120 students), Winter 2021 (Course Coordinator for 10 sections, 400 students)*

Multivariable Differential Calculus: *Fall 2021 (Course Coordinator for 6 sections, 180 students)*

Multivariable Integral Calculus: *Spring 2022 (planned)*

Finite Mathematics: *Fall 2019, Winter 2022 (planned)*

Linear Algebra: *Fall 2019*

A Second Course in Linear Algebra: *Summer 2020, Summer 2021*

Foundations of Higher Mathematics: *Spring 2021*

Combinatorics and Discrete Mathematics: *Winter 2022 (planned)*

Quantitative Reasoning: *Spring 2022 (planned)*

2012-2019: **Graduate Student Instructor, University of Utah**

Precalculus: *Fall 2015*

Intermediate Algebra: *Fall 2014, Summer 2015, Fall 2016*

College Algebra: *Spring 2014, Fall 2018*

Differential Calculus: *Fall 2012, Spring 2013*

Integral Calculus: *Fall 2013*

Linear Algebra: *Summer 2013, Summer 2014, Summer 2018*

Discrete Mathematics: *Spring 2017, Spring 2019*

Complex Variables: *Summer 2019*

Summer High School Number Theory Program: *Summer 2017 (Teacher's Assistant)*

2015: **Teaching Assistant, Park City Math Institute**

Summer School on Moduli Spaces and Representation Theory

Awards and Grants

June 2021: **Award for Excellence in Teaching by a Postdoctoral or Visiting Faculty Member**

- This award recognizes instructional quality and contributions to the Northwestern University Department of Mathematics' undergraduate teaching mission by a postdoctoral or visiting faculty member. The fundamental criterion for the award is a substantial record of teaching excellence.

May 2021: **Open Educational Resource Grant**

- This grant is awarded by Northwestern University to support the work involved in finding, creating, using, and sharing OER as a replacement for commercial textbooks. It was awarded to facilitate the creation of an online calculus textbook for Northwestern University students. The creation of our OER utilizes PreText, a programming language which facilitates conversion of LaTex to an html textbook format.

March 2018: **University of Utah Teaching Assistantship**

- This is a university-wide grant awarded to a limited number of graduate students who develop creative new roles for TAs. The proposal was to create a role of Graduate Teaching Mentor in our department whose duties include in-class observation and consulting with first-time graduate student teachers.

Spring 2016: **Thomas G. Stockham Medal for Conspicuously Effective Teaching, Honorable Mention**

- This is a university-wide award for University of Utah graduate students who exhibit exceptional teaching practices. Only one award is given out per year; this was the only honorable mention given in 2016.

Service

2019-2021: **Evanston Math Circle**

- For the past two years I have organized and led monthly meetings of the Evanston Math Circle, a program which leads K-12 students in investigating a variety of fun and interesting topics in mathematics.

2019-2021: **Evanston Township High School Advanced Topics Instructor**

- I have served as a representative from Northwestern University at the local high school, teaching advanced math topics for students who have exhausted the offered math curriculum.

2021: **Northwestern Mathematics Bridge Program Instructor**

- This is an outreach program with the goal of helping high school seniors from underrepresented communities prepare for university studies.

2021: **Northwestern Mathematics Causeway Program Mentor**

- This is an outreach program similar to the Bridge program above, but with a focus on preparing graduating university students from underserved groups for graduate school.

2015-present: **Sterling Scholarship Judge**

- This is a statewide scholarship competition in Utah; duties involve evaluating student portfolios and interviewing nominees.

Recent Workshops

Summer 2021: Reimagining Teaching Workshop

- A 12-week workshop in which participants read academic literature dealing with novel teaching ideas such as ungrading, inquiry-based learning, and implementing modeling. Additionally, participants split into groups and over several weeks analyzed how a chosen modeling problem could be presented effectively to students.

Spring 2021: Mentoring Up and Down

- A four-week workshop exploring the relationship between mentor and mentee, with a focus on strengthening relationships by encouraging one's own mentees to engage in mentorship of their own.

Winter 2021: Exploring Personal and Social Identity

- An inclusion-focused workshop developed self-reflection and empathy as a tool for creating inclusive classroom environments.

Winter 2021: Crowdmark Implementation and Feedback

- A workshop sharing techniques in using the online grading system Crowdmark, with an opportunity to talk to developers about proposed future features.

2020: Community of Practice Experience

- A recurring workshop during remote teaching where instructors could share ideas about effective online teaching and assessment.

Teaching Evaluations

Below is a summary of my student evaluations from my time at Northwestern University. The evaluations are on a scale from 1-6, with 1 being the lowest and 6 the highest. I have consistently been among the top-rated instructors in the department. Specific detailed course evaluation summaries and student comments are available on request, but I include some selections below.

Course	Term	Provide an overall rating of the instruction.	Rate how well prepared the instructor was for the class.	Rate the effectiveness with which the instructor communicated course content and ideas.	Rate the instructor's enthusiasm in teaching this class.
Finite Mathematics	2019 Fall	5.60	5.80	5.60	5.70
Foundations of Higher Math	2021 Spring	6.00	6.00	6.00	6.00
Foundations of Higher Math	2021 Spring	5.29	5.29	5.00	5.71
Linear Algebra	2019 Fall	5.79	5.75	5.71	5.79
Linear Algebra: Second Course	2020 Summer	5.70	5.60	5.50	5.50
Linear Algebra: Second Course	2021 Summer	6.00	6.00	6.00	6.00
Single-Var Calc with Precalc	2020 Winter	5.67	5.67	5.67	5.67
Single-Var Calc with Precalc	2021 Spring	5.67	5.78	5.56	5.67
Single-Variable Diff Calculus	2020 Summer	5.77	5.77	5.69	5.69
Single-Variable Diff Calculus	2020 Fall	5.71	5.74	5.58	5.55
Single-Variable Diff Calculus	2020 Fall	5.46	5.83	5.42	5.63
Single-Variable Diff Calculus	2021 Summer	6.00	6.00	6.00	6.00
Single-Variable Integ Calculus	2020 Winter	5.17	5.46	5.17	5.29
Single-Variable Integ Calculus	2021 Winter	5.58	5.74	5.58	5.65
Single-Variable Integ Calculus	2021 Winter	5.76	5.88	5.68	5.79
	Average:	**5.68**	**5.75**	**5.61**	**5.71**

Finite Mathematics: "Professor McAfee is one of the most supportive professors I've ever had at Northwestern. He really cares about his students, and wants to see them succeed, always making time for students who needed help. He has an engaging and effective lecturing style that I was surprised by, given by experience with other math professors. Overall, I highly recommend this class, especially if you want to learn more practical math that you can apply in your day–to–day life."

Single-Variable Calculus with Precalculus: "Now, I usually loathe math; it's boring, meticulous, and too confusing for my smooth pea brain. But Sean changed this. He was able to explain the most challenging bits in a clear and simple way and, for once, I actually understood math. I was able to participate in a math class and feel comfortable with the material for the first time in YEARS. This man is the best math teacher I have ever had."

Linear Algebra: "Sean is the best professor to walk foot on this campus. He comes to class everyday very enthusiastic, and ensures that people LEARN the material. He is constantly offering to help you deepen your understanding outside of class."

Single-Variable Differential Calculus: "Professor McAfee truly wants his students to do well. I actually feel more confident in my math skills than I did before, and Professor McAfee explains things in a way that's easy for me to understand. He's the best and the best lecturer I've ever had. Even despite online learning, I actually feel like I learned a lot."