

Michael Freedman

University of Florida
michaelmath.com

mfreedman3@ufl.edu
U.S. Citizen

Education

B.S., Mathematics, University of Florida
Expected May 2021

Directed Reading

Department of Mathematics, University of Florida
Spring 2021

Supervisor: Dr. Luca Di Cerbo

Undergraduate Thesis on Differential Manifolds and Lie Groups

Based on investigation of Lie groups and Lie algebras I conducted in reading course and in preparation for lectures I presented.

Department of Mathematics, University of Florida
Summer 2020 - Fall 2020

Supervisor: Dr. Luca Di Cerbo

Directed Reading on Differential Manifolds and Lie Groups

Course on differential geometry. The text used was Warner's Foundations of Differentiable Manifolds and Lie Groups.

Department of Mathematics, University of Florida
Spring 2020 - Summer 2020

Supervisor: Dr. Krishnaswami Alladi

Directed Reading on Convergents for Continued Fractions

Researched convergents for square roots of positive integers greater than two.

Research

Georgia Tech REU, Summer 2020

· 10 week program investigating Erdős-Szekeres products. *Paper detailing our new results has been submitted to the Proceedings of the American Mathematical Society.*

Talks & Seminars

Fall 2020

· Lecture (3-parts): Lie groups and Lie algebras, Graduate Topology Seminar, University of Florida.

· Lecture: Homology of lens spaces, Class Lecture, Topology 1

Spring 2020

· Lecture: Every metric space is paracompact, Class Lecture, Elements of Topology 2

	<ul style="list-style-type: none"> · Lecture: Product of two normal spaces is not necessarily normal. Exhibited $S_\Omega \times \overline{S}_\Omega$ and showed non-normality, Class Lecture, Elements of Topology 2
	<p><i>Fall 2019</i></p> <ul style="list-style-type: none"> · Lecture : Every topological group is completely regular, Class Lecture, Elements of Topology 1 · Lecture: Necessary and sufficient conditions for the existence and uniqueness of the Alexandroff extension, Class Lecture, Elements of Topology 1
Honors & Awards	Dean's List , <i>Spring 2015 - Fall 2015, Spring 2019, Spring 2020, Fall 2020</i>
Teaching	<p>Calculus 1,2, and 3 Tutor, <i>May 2015- May 2016</i></p> <ul style="list-style-type: none"> · Provided tutoring to all students on a walk-in basis. · Assisted instructor and students with in-class activities.
Extra-curricular	<p>Quiz Bowl, <i>Spring 2015 - Spring 2016</i></p> <ul style="list-style-type: none"> · Captain of 1st place team at 2016 State Competition. · Captain of 2nd place team at 2016 Community College Nationals. <p><i>Quiz Bowl is an academic trivia competition similar to collegiate Jeopardy!</i></p>
Languages	<p>LaTeX</p> <p>German (in progress)</p>
Spring 2021 Coursework	<p>MTG 6347** Topology 2; Algebraic Topology, <i>Hatcher</i>, Chapters 2-3.</p> <p>MAA 6617** Analysis 2; Professor's Notes. <i>Course on Functional analysis; including Banach spaces, Hilbert spaces, and theory of linear operators.</i></p> <p>MAS 7216** The Theory of Numbers 2; Professor's Notes. <i>Course on irrationality, Diophantine approximations and transcendence.</i></p>
Previous Coursework	<p>MTG 6346** Topology 1, A; Algebraic Topology, <i>Hatcher</i>, Chapters 0-2.</p>

MAA 6616** Analysis 1, **A**;
 Professor's Notes. *Course on measure and integration theory, L^p spaces, and an introduction to functional analysis.*

MAS 7215** The Theory of Numbers 1, **A**;
 Professor's Notes. *Course on irrationality, Diophantine approximations and transcendence.*

MAA 6406** Complex Analysis 1, **A**;
 Complex Analysis, *Lang*, Chapters 1-10.

MTG 4303* Elements of Topology 2, **A**;
 Topology, *Munkres*, Chapters 4-7.

MAA 4227* Modern Analysis 2, **A-**;
 Principles of Mathematical Analysis, *Rudin*, Chapters 6,7,10,11.

MAS 5312** Introduction to Algebra 2, **A-**;
 Abstract Algebra, *Dummit and Foote*, Chapters 7-13.

MTG 4302* Elements of Topology 1, **A**;
 Topology, *Munkres*, Chapters 1-4.

MAA 4226* Modern Analysis 1, **A-**;
 Principles of Mathematical Analysis, *Rudin*, Chapters 1-5.

MAS 5311** Introduction to Algebra 1, **B**;
 Abstract Algebra, *Dummit and Foote*, Chapters 7-12.

MAS 4203 Introduction to Number Theory, **A**;
 An Introduction to the Theory of Numbers, *Niven, Zuckerman, and Montgomery*, Chapters 1-4.

MAS 4105 Linear Algebra, **A**;
 Linear Algebra, *Friedberg, Insel & Spence*, Chapters 1-6.

*(Courses marked with a * are mixed classes with graduate students)*

*(Courses marked with a ** are graduate classes)*