Ma 481
Capstone Experience in Mathematics II
2021-22 First Semester

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Office:	Alumni 64 / Ext. 8144
Office Hours:	MW 9:30 – 10:50 a.m. | TF 10:00 a.m. | TH 8:00 – 9:50 a.m. T/TH/F times by appointment. Please message to confirm.
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Course Description:
Required of all students majoring in Mathematics. An independent study of an advanced mathematical topic resulting in a written and oral presentation. Not applicable toward a minor. 1 Credit.

Course Context:
This course supports the following goals of the mathematics program:
MM1: Progress logically from premises to valid conclusions in a variety of mathematical contexts

Course Goals:
CG1:   Develop mathematical maturity and independent thinking. MM1
CG2:   Learn to read and digest mathematical literature. MM1
CG3:   Learn to evaluate mathematical works to determine their value and application. MM1
CG4:   Improve the student's ability to communicate mathematics to others, both orally and in written form.

Course Readings and Requirements:
1. Each student will select, under the direction of his/her faculty research advisor, and read such papers are deemed appropriate to conduct an independent study of a mathematical topic.
2. This class is graded on a standard 10-point scale. Your grade will be determined primarily by the grades earned on the paper and the presentation.
3. Any student who fails to complete any of the following will not pass the class:
   a. Attend a research talk,
   b. Submit a research paper,
   c. Make a presentation of their research, or
   d. Attend the presentation of every math seminar student (not just your own).

Learning Objectives:
The student will
1. Independently learn an advanced mathematical topic. *CG1 (Assessed through periodic meetings and the written and oral reports)*
2. Present the learned material to a group of his peers. *CG2, CG3, CG4 (Assessed by the oral presentation)*
3. Present a written report of the material learned using appropriate mathematical language and formatting. *CG2, CG3, CG4 (Assessed by the written report)*

General Policies:

1. You will set up a weekly meeting with your faculty research advisor. Attendance at these meetings is mandatory (unless other arrangements are made with your advisor).

1. Be sure to keep up with your MS Teams chat session since this will be the primary method of communicating with you in between meetings.

Schedule:

1. Attend a math talk.

2. Research paper:

   • Rough draft checkpoint due 10/29/2021

   • Final draft due 11/19/2021

3. Presentation: TBD between 11/29/2021 and 12/09/2021 (or earlier)

Attendance Policy:

Since this class is primarily an independent study course with no formal lectures, you are only expected to attend "class" when there is scheduled event (such as a group discussion, special speaker, or student presentation). However, you are responsible for keeping up with your studies and reporting your progress regardless of whether or not you are out of town.

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