

Student to be evaluated:

Faculty grading:

Rubric for MATH 4394 - Written Project

Category	Exceeds Expectations	Meets Expectations	Needs Improvement	Inadequate
<b>Motivation</b>	The concepts or the problem studied is well explained and motivated. It addresses where it fits in its mathematical realm, our general knowledge, or how it applies in other disciplines. It cites diverse sources. (4 points)	The concepts or the problem studied is adequately explained and motivated. It has general statements about where it fits in its mathematical realm, our general knowledge, or how it applies in other disciplines. It cites mostly primary sources. (3 points)	The concepts or the problem studied is poorly explained and motivated. It has general statements about applications. It has a few sources. (2 points)	The concepts or the problem studied is not explained or motivated. It has vague statements about applications without any citations. (0 points)
<b>Research Topic</b>	The main research topic is clearly presented with self-contained definitions, examples, analysis, and a cohesive conclusion. Citations are used to strengthen the discussion. (4 points)	The main research topic is presented with definitions, examples, analysis, and a cohesive conclusion. Citations are used to replace some of the discussion. (3 points)	The main research topic is briefly addressed. Some of the definitions, examples, analysis, or conclusions are missing. Citations are used to replace most of the discussion. (2 points)	The main research topic is not well-defined. Most of the definitions, examples, analysis, or conclusions are missing. Citations are used to replace all of the discussion. (0 points)
<b>Topic Mastery</b>	There are technical details of advanced mathematics with clear arguments and proofs. The explanations goes beyond the primary sources. (5 points)	There are technical details of advanced mathematics for most arguments and proofs. The explanations are from the primary sources and are too advanced/elementary (3 points)	There are technical details of advanced mathematics for some arguments and proofs. The explanations are mostly reproductions from the primary sources. (1 points)	There are few to none technical details of advanced mathematics. The explanations are missing and when present are reproductions or citations from the primary sources. (0 points)
<b>Math Mastery</b>	The mathematical terminology and language is precise and unambiguous. There are appropriate examples, analogies, and counterexamples when needed. (5 points)	The mathematical terminology and language is correct but not uniform. The student provides appropriate examples, analogies, and counterexamples when needed. (3 points)	The mathematical terminology and language is precise and unambiguous. There are few appropriate examples, analogies, and counterexamples. (2 points)	The mathematical terminology and language has many errors. There are no appropriate examples, analogies, and counterexamples. (1 points)

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<b>Depth of Discussion.</b>	There is a deep analysis of the research topic that includes detailed formulations of definitions and rigorous solution or partial solutions that goes beyond the materials from the primary sources. (5 points)	The analysis of the research topic that includes formulations of definitions and rigorous solution or partial solutions that uses the materials from the primary sources and occasionally from other sources. (3 points)	The analysis of the research topic has definitions and solution or partial solutions that uses the materials from the primary sources. (1 points)	The analysis of the research topic does not include definitions and solution or partial solutions are done by citing primary sources. (0 points)
<b>Integration of Knowledge</b>	There are insights on implications, applications, and possible extensions of the results which are discussed throughout the paper. (4 points)	There are general insights on implications, applications, and possible extensions of the results which are discussed throughout the paper. (3 points)	There are some general insights on implications, applications, and possible extensions of the results which are discussed in a few sections of the paper. (2 points)	There are few to no insights on implications, applications, and possible extensions of the results. (1 points)
<b>Spelling and Grammar</b>	No spelling and/or grammar mistakes, including LaTeX. (4 points)	Minimal spelling and/or grammar mistakes, including LaTeX. (3 points)	Noticeable spelling and grammar mistakes, including LaTeX. (2 points)	Unacceptable number of spelling and/or grammar mistakes, including LaTeX. (1 points)
<b>Sources</b> N = 8 (or set by advisor) M = 4 (or set by advisor)	More than N current sources, of which at least M are peer-review journal articles or scholarly books. All web sites, if any, are authoritative (no Wikipedia). (2 points)	Around N sources, of which at least M are peer-review journal articles or scholarly books. All web sites, if any, are authoritative (no Wikipedia). (1 points)	At least 3 sources, but fewer than N sources and less than M are peer-review journal articles or scholarly books. All web sites, if any, are credible. (0.5 points)	Fewer than 3 sources with at least one which is a peer-review journal articles or scholarly books. Not all websites are credible (includes Wikipedia). (0 points)
<b>Citations</b>	Cites all data obtained from other sources. Uses an approved AMS style in both text and bibliography. (2 points)	Cites most data obtained from other sources. Uses an approved AMS style in both text and bibliography. (1 points)	Cites some data obtained from other sources. Citation style is either inconsistent or incorrect. (0.5 points)	Does not cite sources. (0 points)

Total Points: