WILLIAM WOODS
UNIVERSITY

Mathematics Annual Assessment 2021-2022

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Annual Assessment 2021-2022

Mathematics

Program Profile

Program Mission Statement
Please insert your program mission statement here

The mission of the Mathematics program is to provide an environment where students can learn and become accomplished users of Mathematics and Mathematical applications. The program contributes to the development of students as Mathematical thinkers, enabling them to become life-long learners, to continue to develop in their chosen professions, and to function as productive citizens.

Program Data

Delivery Method

Traditional On Campus (selected)
Online
Hybrid

	Student Majors	Student Minors
2020-2021	**1**	**6**
2021-2022	**1**	**5**

Concentrations 2020-2021
If your program contains concentrations, please list the concentrations and the number of students identified within each concentration.

There are no concentrations in the Mathematics program.

Concentrations 2021-2022
If your program contains concentrations, please list the concentrations and the number of students identified with each concentration.

There are no concentrations in the Mathematics program.

Student Demographics
What are the program goals for student retention, persistence and degree completion? What do the persistence numbers mean to the faculty in the program? Are the persistence numbers what the program expected? If not, how could the numbers improve?

The Mathematics faculty proposed a new Mathematics Secondary Education major to allow students to be certified to teach high school without needing to complete the process through independent study. After some discussion and adjustments, the plan was modified to a Mathematics concentration to the Secondary Education major. This program is planned to begin in the fall of 2022. The Mathematics faculty will discuss changes to our assessment process as this new program starts. We have one student still completing the B.A. degree in Math. We are also considering a proposal for a Mathematics major with emphasis in Actuarial Science.

The Mathematics faculty would like to increase the enrollment in the program. Although the individual attention and small classes sizes are positives, it would be helpful to have more students to support the growth of the program. Some of the classes in the past have been tutorials, and the faculty would like to lessen the chances of that being necessary. The small sample size of students makes discussion of the persistence numbers challenging. Most of the students who entered the program have completed it.

Optimal Enrollment
Considering current human and physical resources, what is the optimal enrollment for the program?

Is the Program Externally Accredited

Yes
No (selected)

External Accreditation
Name the Accrediting Agency or entity including the last review/approval. Is there an accrediting body for the field of study? If yes, what is the name of the group? Is the program seeking accreditation? If no, why?

There is no outside accreditation for Mathematics.

Admissions and Marketing Materials
Reflect on the current marketing materials used for the program. Please attach screen shots of the website or any material you are referencing in this section. What changes, if any, should be made to the material? Are there recommendations on how to modify the current material?

There are no materials currently specific to the Mathematics program, the minor is mentioned in the general Science and Health literature. A separate brochure should be prepared for the Mathematics Secondary Education major program when it is developed.

Marketing Material

Program Assessment

Standard/Outcome

Identifier	Description
WWU2021.1	Knowledge and Scholarship: Demonstrate current knowledge and educational expertise in an academic or professional discipline engaging students in the process of academic discovery.

Additional Standards/Outcomes

Identifier	Description
MAT.1	Apply mathematical concepts, methods and tools in solving problems pertaining to the world at large.
MAT.2	Model rates of change and accumulation of various quantities and find conditions under which those quantities are optimized in both discrete and continuous settings.
MAT.3	Identify and demonstrate pattern and structure inherent in performing different operations on mathematical objects.
MAT.4	Analyze situations involving multiple objects and constraints using multidimensional space.
MAT.5	Demonstrate the dependence or independence of mathematical statements upon their axiomatic framework.
MAT.6	Exhibit competence in various methods of analytic proof.
MAT.7	Accurately use algorithms in appropriate contexts.
MAT.8	Demonstrate the existence of numerical, geometric, and symbolic trends and make conjecture based on those trends.

Alignment to the University Objectives
Please discuss the Program alignment to the University Objectives. Specific evidence is not to be uploaded, but discussion is expected of the assignment, and intentionality of how the objective is met with program curriculum.

Major Field Competence: Students who major in Mathematics at William Woods receive exposure to a variety of Mathematical concepts, both applied and theoretical, that will allow them to continue their discovery of Math either in graduate school, or in a career such as actuarial science.

Ethics: Statistics are encountered every day by all citizens. However, just because data is presented and a conclusion drawn from the information, it does not mean that it is good data or a good conclusion. Taking Mathematics courses (Statistics along with other courses) allow individuals to interpret the information and make their own conclusions as to the validity of the data/conclusions.

Self-Liberation: Many people have what is commonly referred to as "Math anxiety". They may have been afflicted with this at an early age, or they may have acquired it through their primary school years. The instructors in the Mathematics courses try to remove this anxiety from the students and show them that anyone can do Mathematics if they apply themselves. The realization that they can do the problems does give students an appreciation of themselves and allows them the ability to interpret all the numbers in our daily lives.

Lifelong education: It is the hope of the Mathematics faculty that students (the majors in particular, but hopefully all students) do take what they have learned in their classes and have a curiosity in the future and recall some of the things they learned.

General Education Alignment to Program
How do the General Education criteria align with Program Objectives? What courses within the program build upon skills learned from general education courses (please list the program course and the general education criteria)? The General Education clusters are attached to the document below.

Communication: Mathematics majors need to have communication skills to present steps in a problem clearly. They also need to be able to communicate their understanding of Mathematical concepts to others, both in written and spoken form.

Critical Thinking: Critical thinking is required in all Mathematics courses to analyze and construct Mathematical proofs of concepts.

Meaning: Students are required to read chapters in their textbooks in all courses and identify central themes and underlying meaning. They often need to identify central themes of individual courses as well.

Ethics: Ethics is often a major concern in Statistics courses. Data should not be modified to meet the desired goals, nor should testing processes be developed to achieve a certain goal.

Historical Perspective: Mathematics is a sequential process, so the historical perspective on how these processes is achieved is often studied. Also, we often investigate particular results or theorems and the process of their development.

Fine Arts: Mathematics is often a visual process, requiring an understanding of geometrical shapes and curves. While artistic ability is not always required for this, it can assist in visualizing these concepts.

Natural Science: In the Mathematics courses, applications to other disciplines are often studied. Fields of natural science such as Physics and Biology frequently require Mathematical concepts.

Social Science: Statistics are often needed to analyze data collected in Social Sciences such as Psychology and Sociology. Also, economics often requires analyzing financial data.

Diversity: Many Mathematical concepts were developed by cultures other than our own. Mathematics is often considered the “universal language”, meaning it is the result of the collective human experience.

(HLC 4B1)

GE_Cluster_Descriptions_FINAL_Version_Approved.docx

NSSE Objectives Discussed Fall 2019

Program Alignment to NSSE Objectives
How did the program integrate the three NSSE objectives determined by the faculty in the fall of 2019? The objectives were to 1) integrate more interdisciplinary work within the curriculum, 2) to connect learning to societal problems or issues, and 3) to examine the strengths and weaknesses of their (students) own views on a topic or issue. Please articulate which courses, and what assignments were assigned and how the work was assessed. Were the assignments successful? What could have made them more successful?

1- Mathematics has always had a strong connection to the other sciences, particularly Biology and Physics. In the Biostatistics and Elementary Statistics courses, more examples were included that incorporated situations Biology students might see in their actual careers. There were no specific assignments added that addressed this topic.

2- Statistics are often used to support positions on social problems. Unfortunately, these statistics can also be misused to give credence to a certain narrative. It is important that students are able to interpret the data and reach their own conclusions independently.

3- With the knowledge gained in the Math and Statistics courses, hopefully students are able to understand their views in a more educated manner.

Curriculum Map

A - Assessed
R - Reinforced
I - Introduced
M - Master

CURRICULUM MAP

	MAT 124	**MAT 214**	**MAT 215**	**MAT 224**	**MAT 312**	**MAT 313**	**MAT 314**	**MAT 324**	**MAT 325**	**MAT 422**	**MAT 423**	**SPR**
MAT.1 Apply mathematical concepts, methods and tools in solving problems pertaining to the world at large.	I	R	R		R	R	R	M	M	M	M	A
MAT.2 Model rates of change and accumulation of various quantities and find conditions under which those quantities are optimized in both discrete and continuous settings.	I	R	R	R	M	R						
MAT.3 Identify and demonstrate pattern and structure inherent in performing different operations on mathematical objects.			R	R	R	R	R	M	M	M	M	A
MAT.4 Analyze situations involving multiple objects and constraints using multidimensional space.				I, M		R	R					
MAT.5 Demonstrate the dependence or independence of mathematical statements upon their axiomatic framework.	I	R, I		I	R	M, A						A
MAT.6 Exhibit competence in various methods of analytic proof.	I	R	R	R	R	R	R	M	M	M	A	A
MAT.7 Accurately use algorithms in appropriate contexts.			I			R			M, A			A
MAT.8 Demonstrate the existence of numerical, geometric, and symbolic trends and make conjecture based on those trends.	I	R		R	R	R	A, M	R	R			A

Changes to Curriculum
Are there any changes made to the curriculum map for this academic year? If so, please describe the program changes made along with the rationale for why and the impact the change should have on student learning?

We have not made any changes to the curriculum map for the 2021-22 academic year. The faculty will discuss the map as we introduce the Mathematics concentration to the Secondary Education degree.

Assessment Findings

Assessment Findings for the Assessment Measure level for CURRICULUM MAP

Standard/Outcome
MAT.1 Apply mathematical concepts, methods and tools in solving problems pertaining to the world at large.

Assessment Measures

SPR				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Portfolio Review	Has the criterion 80% of the students receive a score of 3 or higher on a 4-point scale for portfolio presentation? Been met yet? Met	1 of 1 (100%) of students met the criterion.		

Standard/Outcome
MAT.3 Identify and demonstrate pattern and structure inherent in performing different operations on mathematical objects.

Assessment Measures

SPR				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Portfolio Review	Has the criterion 80% of the students will receive a score of 3 or higher on a 4-point scale for portfolio presentation. Been met yet? Met	1 of 1 (100%) of students met the criterion.		

Standard/Outcome
MAT.5 Demonstrate the dependence or independence of mathematical statements upon their axiomatic framework.

Assessment Measures

MAT 313				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Final Exam	Has the criterion 80 percent of students achieved 80 percent or higher on the final exam? Been met	MAT 313 was not offered in the 2021-		

	yet?	22 year.		

SPR				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Portfolio Review	Has the criterion 80% of the students will receive a score of 3 or higher on a 4-point scale for portfolio presentation. Been met yet? Met	1 of 1 (100%) of students met the criterion.		

Standard/Outcome	MAT.6 Exhibit competence in various methods of analytic proof.

Assessment Measures

MAT 423				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Class Assignment	Has the criterion 80 percent of majors score 80% or above on homework in the course. Been met yet? Not met	0 of 1 student (0%) met the criterion.		

Standard/Outcome
MAT.7 Accurately use algorithms in appropriate contexts.

Assessment Measures

MAT 325				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Class Assignment	Has the criterion 80 percent of students achieved 80% or higher on class project assignment. Been met yet?	MAT 325 was not offered in the 2021-22 year.		

Standard/Outcome
MAT.8 Demonstrate the existence of numerical, geometric, and symbolic trends and make conjecture based on those trends.

Assessment Measures

MAT 314				
Assessment	**Criterion**	**Summary**	**Attachments of**	**Improvement**

Measure			the Assessments	Narratives
Direct - Class Assignment	Has the criterion 80 percent of majors achieved 75% or higher on the class project assignment. Been met yet?	MAT 314 was not offered in the 2021-22 year.		

SPR				
Assessment Measure	**Criterion**	**Summary**	**Attachments of the Assessments**	**Improvement Narratives**
Direct - Portfolio Review	Has the criterion 80% of the students will receive a score of 3 or higher on a 4-point scale for portfolio presentation. Been met yet? Met	1 of 1 (100%) of students met the criterion.		

Analysis of the Assessment Process
Describe your assessment process; clearly articulate how the program uses coursework and or Student Performance Review for program wide assessment. Note any changes that occurred to the process since the previous year. Discuss what activities were successful and which ones were not as helpful and why. Please include who met to discuss the changes (unless you are a program of one person) and when you met. – Include a discussion on the process for collection and analysis of program data.

There were no changes to the assessment process this year. The Mathematics faculty met with the remaining major for a personal interview. The student was asked to prepare a portfolio discussing his coursework thus far in his college career, and also asked to prepare a presentation of a problem from his coursework in the current semester. In the interview, he presented his problem and also answered questions from the faculty. The student also took the Mathematics major field test, as well as the CLA examination.

Improvement Narrative List

Assessment Findings for the Assessment Measure level
No improvement narratives have been added.

Program Activities

Student Performance Review
Describe the department Student Performance Review activities if not already articulated. Please describe the nature of the assessments conducted as well as the process of assessment happening on these two days. Include the schedule of assessment day for your program. What does the data and outcomes tell you? What changes will you make as a result of the data? What areas are successful for the program?

We administered the major field test this year to our remaining major. This is the fourth year we have administered the MFT.

We conducted the interview with the remaining Mathematics major in-person this year, following the same format as we have used in past years. Only the Mathematics faculty participated in the interview process this year.

Student Performance Review Schedule
Upload the program schedule for students during Performance Reviews.

SPR_Mathematics_2022.pdf

Senior Showcase/Symposium
Describe program activities used to highlight Senior achievement. What benefit does the program gain from the activities? What if any assessment of students happens during this event?

We did not have any graduating seniors this year, so we did not have any Senior Showcase activities.

Tools used for Assessment
Upload rubrics or other Assessment based tools used by the program that are important to the assessment process.

Mathematics_Assessment_Rubric.pdf

Service Learning
Does the Program include projects/ course content that uses the philosophy of service learning?
Yes
No (selected)

Service-Learning Component
If so, how is service learning infused in the coursework within your department? Is service or community engagement in the program mission? Describe the Service-Learning Activities that your students and department engaged in this past year. How did the activities improve student learning? How did the activities benefit the community?

There is no Service-Learning component in Mathematics.

Co-Curricular and LEAD Events
Describe Co-Curricular and LEAD events sponsored by program faculty. This includes LEAD and other events meant to engage students and foster learning outside of the classroom.

We did not have any LEAD events related to Mathematics this year, primarily due to COVID concerns.

Student Accomplishments
Highlight special examples of student successes in the field (academic: mentor-mentee, conference presentations, competitive internship, journal acceptance; extra-curricular: horse show championship, art exhibit). This is for any accomplishment a student achieved outside of course work or the normal expectation of student success.

Opportunities for student accomplishments were limited this year due to COVID concerns.

Alumni Accomplishments
Please highlight special examples of any successes of recently graduated alumni (acceptance or graduation graduate school, employment or professional milestones).

Recent graduate Aurora Henriksen is pursuing graduate study in Mathematics at a university in her native Norway. Mikayla Maple Laburay and Bailey Ward are both employed with Veterans United Home Loans. Briley Browning taught high school Mathematics at Troy, Missouri. James Rogers is attending graduate studies in the United Kingdom. We do not have any information on Mackenzie Hawkins, who graduated last year.

Faculty Accomplishments
Highlight special examples of faculty success in the profession/field/content area. This is for any accomplishment of a faculty member that is research or professional in nature.

All Mathematics faculty attended a virtual conference conducted by Kappa Mu Epsilon, a national honor society that has an active chapter at William Woods.

Appendix

Clear	3.000 Exceeds	2.000 Meets	1.000 Fails Below Expectations	N/A
Mission Statement Clearly Articulated weight: 1.000	The mission statement for the program is insightful and forward thinking. It aligns with the University Mission and learning objectives showing a clear alignment between the University and the program.	✓ The mission statement for the program clearly articulated and aligned with the University mission.	The mission statement is minimal at best.	N/A
Comment:				
Reflection on Student Demographics, Retention, and Degree Completion Data weight: 1.000	The program provides a detailed description on the enrollment, retention, persistence and degree completion numbers. The program provides new ideas on how to improve retention of their program students or articulates what they are currently doing to keep students in their program.	✓ The program provides a basic reflection on enrollment, retention, persistence, and degree completion data provided.	The program does not reflect on enrollment, retention, persistence, and degree completion data in a detailed way.	N/A
Comment:				
Marketing Materials weight: 1.000	The program outlines the successes and needs in regards to marketing. Detailed suggestions on how to market the program and what niche areas that are program specific would benefit the marketing strategy.	✓ The program discussed the general marketing strategy for the program.	The program provided little to no discussion on the marketing materials or approach to how to market the program.	N/A
Comment:	There are no marketing material for the Math minor			
Alignment to University Objectives weight: 1.000	The program provides a detailed explanation of how program courses align to the Institutional Objectives. This explanation details specific courses, or activities that coordinate with the intent of the Institutional Objectives.	The program provides a basic explanation of how program courses align to the Institutional Objectives. This explanation provides a minimal understanding of how the program is aligned to the Institutional Objectives.	✓ The program provides little to no explanation of how program courses align to the Institutional Objectives.	N/A
Comment:	the program is aligned to the old objectives			
General Education alignment clearly explained weight: 1.000	The program provides a detailed explanation of the General Education criterial and how the basic skills learned are expanded upon in the program. Details include but are not limited to: specific courses, or activities that stretch the knowledge of the specific areas.	✓ The program provides a basic explanation of the General Education curriculum and how the skills learned are expanded in program courses.	The program provides a minimal explanation of the General Education curriculum and how the skills learned are expanded in program courses.	N/A
Comment:				
NSSE Objectives weight: 1.000	The program provided a detailed listing of activities and assessments used within the program that focused on the identified NSSE objectives. The activities and assessments were divided out within the curriculum and impacted different cohort groups.	✓ The program provided a basic explanation of the activities and assessments used within the program that focused on the identified NSSE objectives.	The program provided minimal explanation of the activities and assessments used within the program that focused on the identified NSSE objectives.	N/A
Comment:				
Curriculum Map alignment and changes weight: 1.000	The curriculum map is detailed and complete. All Changs made to the curriculum map are detailed with supporting rationale for the decision..	✓ The curriculum map is complete. Changes made to the curriculum map are explained with some explanation as to why the changes were implemented.	The curriculum map is not complete and little to no explanation on curricular changes was provided.	N/A
Comment:	no curricular changes were made			
Assessment Map weight: 1.000	Assessment of objectives are spread out across the curriculum with a variety of assessment measures and each program objective is assessed a minimum of twice a year.	✓ Each objective is assessed a minimum of 2 times a year or an assessment rotation is explained so that all objectives are assessed. The assessments are not concentrated in one class.	The assessment map is not complete or much of the assessment happens in only one course. Not all objectives are assessed annually, nor is a plan provided on assessment.	N/A
Comment:	for a minor program the assessment is appropriate and complete.			

Data Driven Decision-making is explained weight: 1.000	An overview of program assessment is provided with details on the specific successes and challenges from the year. A detailed review of how assessment was administered over the academic year is clearly outlined.	✓ A basic overview of program assessment is provided with some details on the successes and challenges from the year. A basic review of how assessment was administered over the academic year is outlined.	A basic overview of program assessment is not provided with little to no discussion on the administration of assessment over the academic year.	N/A
Comment:				
Documentation provided on assessment findings weight: 1.000	The program uploads all rubric and support information to support the claims in the assessment findings along with detailed instructions on the assessment process and data analysis.	✓ The program uploads all rubric and support information to support the claims in assessment findings.	The program did not upload the data to support assessment claims in the assessment findings.	N/A
Comment:	the missing assessment was due to rotation and not a gap in administration.			
Analysis of Assessment weight: 1.000	The program completed assessment findings for each component identified, and provided a comprehensive summary of each assessment measure identified in the report.	✓ The program completed the assessment findings for each component and provided a summary for each assessment measure.	The program did not provide a completed assessment findings for each component, nor did they complete the summary for each measure.	N/A
Comment:				
Improvement narratives are selected with intentionality weight: 1.000	The program identified Improvement Narratives that appear to move the program forward and see the bigger picture than only the specific program curriculum options	The program used the provided Improvement Narratives and selected options that made sense to the objectives and issues within the assessment.	✓ The program did not use any improvement narratives, or the ones chosen are not aligned with assessment results.	N/A
Comment:	when working with one student, it is hard to pull data to make decisions on best practice moving forward or how to modify curriculum			
Student Performance Review weight: 1.000	The program described and provided a detailed account of Student performance Review activities. Data evidence provided and detailed.	✓ The program provided the schedule and a brief description of Student Performance Review with data of the results.	The program did not provide complete explanation on Student Performance Review nor did they provide data results.	N/A
Comment:	The program is a minor and not required to participate, but they elected to continue their assessment procedures.			
Senior Showcase weight: 1.000	The program had all senior students participate in Senior Showcase and provided a detailed explanation of their expectation and the presentations presented.	The program described the Senior showcase activities and provided some evidence of what was presented.	Little to no content of Senior showcase was provided.	✓ N/A
Comment:	the program had no graduating seniors			
Co Curricular and LEAD activities weight: 1.000	The program detailed the activities of LEAD and other co-curricular programing that was provided throughout the year. They provided numerous events for students.	The program provided a listing of LEAD events and activities provided.	✓ The program provided little to no description of the Co-curricular activities provided throughout the year.	N/A
Comment:				
Faculty, alumni, and Student accomplishments weight: 1.000	The program provided detail updates on successes on Students, Alumni and Faculty with added information explaining the kinds of success that were experienced.	✓ The program provided a listing of information on Students, Alumni, and faculty accomplishments.	The program provided little to no data on students, alumni, faculty accomplishments.	N/A
Comment:				

Appendix: Supplemental Documentation

WILLIAM WOODS
UNIVERSITY

Program: Mathematics
Student Performance Review Schedule
February 22-23, 2022

Date	**Time**	**Student Group (Fr/So/Jr/Sr)**	**Activity**	**Location/Format**	**Faculty Contact**	**Program Objective**
Tue 2/22	9:00-11:00	Zach Knopf	Major Field Test	SL 312	Chris Schneider	All program objectives
Tue 2/22	11:00-12:00	All KME members	KME induction	SL 312/301	Chris Schneider	
Wed 2/23	9:00-11:00	Zach Knopf	CLA exam	Burton 205	Carrie McCray/Chris Schneider	
Wed 2/23	11:00-11:30	Zach Knopf	Individual interview	SL 312	Chris Schneider	All program objectives

Performance Assessment Rubric

MATHEMATICS

Name: _____

LEVEL: Freshman Sophomore Junior Senior

Criteria	Exemplary Performance Level (4)	Professional Level (3)	Performance Improvement Required (2)	Unprofessional Level (1)	Comments
Overall grade profile	Consistent, high level of academic performance reflected in excellent grades across the board.	Good performance, shows high levels of effort and achievement.	Showing improvement, recent academic record reflects improved performance.	Below average in performance, in major courses and/or elsewhere.	
Classroom initiative and performance	Enjoys learning for the sake of learning, reads more than just required material, always prepared for class	Sometimes appears more focused on grade or other college experiences than learning, usually prepared and homework usually on time.	Does the minimum required work, often complains about the work and is resistant to learning, inattentive in class	Appears to not want to be in class, there only for the credit, disengaged and does not complete assignments.	
On track with courses toward major	Ahead of schedule, has taken extra course work for grade level.	On track, at the level that would be expected for him/her at this point.	Making progress, may need to take summer courses or delay graduation.	Difficult to see how student can complete major in a reasonable length of time.	
On track with courses toward minor(s)	Ahead of schedule, has taken extra course work for grade level.	On track, at the level that would be expected for him/her at this point.	Making progress, may need to take summer courses or delay graduation.	Difficult to see how student can complete declared minor in a reasonable length of time.	
On track toward completing common studies/foreign language requirements	Ahead of schedule, has taken extra course work.	On track towards completion of requirements.	Making progress, may need to take summer courses.	Behind schedule to complete requirements.	
Maturity	Consistently demonstrates a mature attitude toward course of study, clear progress toward stated goals.	Generally demonstrates mature attitude toward studies, progressing toward stated goals.	Attitude and behavior does not always reflect college level maturity.	Attitude and behavior inappropriate for college level.	
Willingness to accept suggestions and criticism	Accepts suggestions and criticisms cheerfully, willing to learn from mistakes.	Generally professional response to suggestions and criticism.	Makes excuses or denies mistakes.	Frequently unwilling to accept responsibility for actions.	
Ability to work cooperatively	Works well with peers and superiors, sought out as a leader.	Satisfactory work with classmates and faculty.	Lets others do the work, or tries to dominate the group.	Does not participate in or try to maximize the opportunities for group learning.	
Ability to work independently	Internal motivation, sets goals, carries them out with minimal direction.	Works satisfactorily when given precise steps.	Frequently cannot follow directions or know where to begin.	Not a self-starter at this point in time.	

Realistic goals and plans for the future	Appears to be a consistent match among abilities, goals, and steps to achieve career goals.	Has some plans, procedure to achieve them partially resolved.	May be a mismatch between stated goals, work ethic, and student ability to achieve goals.	Not realistic about level of commitment needed to achieve goals.	
Extra-curricular activities, internships, work study	Exceptional use of extra-curricular activities to enhance overall learning and achieving personal and career goals.	Some extra activities that will enhance personal and career opportunities.	Either extra activities do not enhance stated goals, or few are being pursued.	Shows little interest in any extra-curricular enhancement.	
Breadth and depth of interests	Shows a variety of interests within Mathematics and other disciplines, exhibits energy in pursuing them.	Shows passion for at least one area within Mathematics.	Goes through the motions but shows no commitment to any area.	Exhibits little interest for any area in Mathematics.	
Interview effectiveness	Clearly organized, easily understandable, exceptional ability to think and answer questions thoughtfully on the spot.	Generally organized and understandable, good ability to think and answer questions thoughtfully on the spot.	Limited organization, sometimes difficult to understand, has difficulty in answering questions thoughtfully on the spot.	Presentation shows minimal effort.	
Professional appearance and Demeanor	Very professional behavior and dress.	Appropriately dressed for the interview, appropriate behavior.	Appearance and behavior less than appropriate for this setting.	Inappropriate and unacceptable appearance and behavior.	
Presentation of Portfolio	Portfolio is thoughtfully and thoroughly prepared.	Portfolio is complete.	Portfolio requirements have been minimally fulfilled.	Portfolio incomplete or turned in late.	
Mission Statement	Excellent statement, thoughtfully reflects ideals and goals.	Well crafted statement that is appropriate to ideals and goals.	Has attempted to encapsulate ideals and goals.	Mission statement is lacking, needs further work.	
Reflection in course work and other activities	Integrated and thoughtful answers.	Requirements for reflection fulfilled.	Showed uneven preparation, reflection does not convey a common point.	Unsatisfactory and incomplete reflection of work.	

Reviewer's Comments: