

**STUDENT LEARNING ASSESSMENT PROGRAM  
SUMMARY FORM AY 2018-2019**

**Degree and Program Name: M.A. Mathematics**

**Prepared by: Bogdan Petrenko, Graduate Coordinator since June 1, 2017**

**PART ONE**

What are the learning objectives?	How, where, and when are they assessed?	What are the expectations?	What are the results?(students) GPA 0.0 to 4.0	Committee/ person responsible? How are results shared?
<p>1. Depth of Content Knowledge: Students will learn fundamental principles at an advanced level in selected areas of mathematics.</p>	<p>Uniform exit exams in required courses-</p> <p>MAT 5000: Mathematics Graduate Seminar</p> <p>MAT 5100: Abstract Algebra</p> <p>MAT 4760: Linear Algebra</p> <p>MAT 59501: Thesis I</p>	<p>Students should obtain at least a “B” (3.00 out of a 4.00 scale) or better on the first attempt.</p>	<p><u>FA 2019:</u></p> <p>MAT 5000: 4 of 4 students met expectations.</p> <p>MAT MAT 5100: 4 of 4 students met expectations.</p> <p>MAT 53352: 3 of 3 students met expectations.</p> <p>MAT 59501: 2 of 2 students met expectations.</p>	<p>Data are collected by course faculty and graduate coordinator. Results are shared with chair and graduate committee. Students who earn a “B” or lower must meet with graduate coordinator to discuss potential issues, deficiencies, and graduate school regulations that may be present moving forward.</p>

	<p>MAT 5000: Mathematics Graduate Seminar</p> <p>MAT 5220: Topology</p> <p>MAT 5330: Complex Variables</p>		<p>SP 2020</p> <p>MAT 5000: 1 of 1 students met expectations.</p> <p>MAT 5220: 2 of 2 students met expectations.</p> <p>MAT 5330: 1 of 1 students met expectations.</p>	
<p>2. Critical Thinking &amp; Problem Solving: Students will demonstrate the ability to think and write critically, as well as acquire technical and problem solving skills.</p>	<p>a) Evaluation of a selection of assignments from 5000+ level coursework.</p> <p>b) Teaching and/or providing supplemental instruction.</p>	<p>a) Students should obtain at least a “B” (3.00 out of a 4.00 scale) or better on coursework samples.</p> <p>b) Teaching evaluations should be at the satisfactory or higher level. Supplemental instruction rating should be at the satisfactory or higher level</p>	<p>FA 2018:</p> <p>a) MAT 5000: 4 of 4 students met expectations.</p> <p>MAT MAT 5100: 4 of 4 students met expectations.</p> <p>MAT 53352: 3 of 3 students met expectations.</p> <p>MAT 59501: 2 of 2 students met expectations.</p> <p>b) 2 of 2 students met expectations.</p>	<p>a) Data are collected by course faculty and graduate coordinator. Results are shared with chair and graduate committee.</p> <p>Students who earn a “B” or lower must meet with graduate coordinator to discuss potential issues, deficiencies, and graduate school regulations that may be present moving forward.</p>

			<p>SP 2017:</p> <p>a) MAT 5000: 1 of 1 students met expectations.</p> <p>MAT 5220: 2 of 2 students met expectations.</p> <p>MAT 5330: 1 of 1 students met expectations.</p> <p>b) 1 of 1 students met expectations.</p> <p>Teaching: 2 graduate students were assigned teaching duties in FA 2019, and 1 graduate students were assigned teaching duties in SP 2020</p> <p>Supplemental instruction – all graduate students were rated above the satisfactory level.</p>	<p>b) Department chair solicits student feedback from supplemental instruction sections.</p> <p>Supplemental instruction ratings are shared with students in a conference with the graduate coordinator and department chair.</p>
3. Oral & Written	Presentations given	Students should	FA2019:	Data are collected by

<p>Communication Skills: Students will be able to communicate advanced mathematics in both oral and written format; as well as be able to read and assimilate advanced research level mathematics from original and secondary sources.</p>	<p>during the graduate seminar (taken over 2 semesters)</p>	<p>obtain at least a “B” (3.00 out of a 4.00 scale) or better in each seminar. Each presentation should rate at least at the “Basic” level or higher for each presentation.</p>	<p>4 of 4 students exceeded expectations for seminar. 3 of 3 students rated at least “Basic” or higher for each presentation.</p> <p>SP 2020: 1 of 1 students exceeded expectations for seminar.</p>	<p>seminar/independent study faculty and graduate coordinator. Results are shared with chair and graduate committee.</p> <p>Students who earn a “B” or lower must meet with graduate coordinator to discuss potential issues, deficiencies, and graduate school regulations that may be present moving forward.</p> <p>Presentation results are shared with students.</p>
<p>4. Advanced Scholarship through Research and Creative Activity</p>	<p>Thesis work and presentations</p>	<p>Thesis was be completed in a timely manner (generally 2 semesters) and exhibit the qualities as described in the Graduate School Thesis Manual.</p>	<p>Two students defended their Master Thesis in Spring 2020.</p>	<p>Thesis advisor and thesis committee are primarily responsible for assessing the quality of the thesis.</p> <p>Results are shared with student through the thesis presentation/defense.</p>

## **PART TWO and PART THREE**

(2) Describe your program's assessment accomplishments since your last report was submitted. Discuss ways in which you have responded to the CASA Director's comments on last year's report or simply describe what assessment work was initiated, continued, or completed.

(3) Summarize changes and improvements in **curriculum, instruction, and learning** that have resulted from the implementation of your assessment program. How have you used the data? What have you learned? In light of what you have learned through your assessment efforts this year and in past years, what are your plans for the future?

In general, a mathematics graduate program is able to offer a significant number of graduate assistantships. Unfortunately over the past several years our ability to offer assistantships has eroded due to lack of support from the Graduate School. **We currently have only 1 Graduate Assistantship.** Furthermore, students who manage to pay for their own graduate education expenses (many will go elsewhere instead of doing so for mathematics programs) are not receiving the teaching skills required to be an effective community college instructor or teaching assistant at their Ph.D. programs. Therefore, such students are likely to be unemployable as mathematics instructors upon their graduation.

In AY 2019-2020 the department continued a Supplemental Instruction (SI) program for graduate students. SI provided additional instruction for various undergraduate courses. While the program provided graduate students with opportunities to provide instruction and be responsible for class meetings, the program will most likely not continue beyond this academic year. Instead, we will have graduate students teaching courses once again.

We have continued the one credit hour graduate seminar. During AY 2019-2020. The goal of the seminar was to develop the students' techniques and discover their own styles of communicating advanced topics in mathematics in the classroom setting. Each student, or a group of students, in the seminar gave a presentation on some advanced topic in mathematics of interest to the participants. The topic was announced in advance which would allow the non-presenters to read and think about the upcoming presentation. Before their presentation, presenters would distribute their written notes in class not only to make the presentation easier to follow but also to develop their mathematical writing techniques and their own style of writing mathematics. In addition, if a computer code or a computer generated image were part of a presentation, the corresponding files would also be shared with class by the presenters. At any time during the presentation time if something was not entirely clear, the participants were encouraged to raise their hand and ask for clarification. At the end of a presentation the participants were encouraged to offer a different way of explaining the presented material.

**Student Learning Assessment Program  
Response to Summary Form  
Graduate Program 2020  
May 3, 2021**

Department: **Mathematics and Computer Science**

Degree and Program Name: **M.A. Mathematics**

Reviewers: Dr. Nikki Hillier, Graduate Assessment Coordinator, Graduate School

Dr. Ryan C. Hendrickson, L.M. Hamand Dean

<b>Category</b>	<b>Comments</b>
<b>Learning Objectives</b>	The objectives for the program align with all the graduate learning goals established by EIU's Council on Graduate Studies. As noted by the previous assessment coordinator and not yet implemented, your assessment effort would be more robust by addressing the 4 <sup>th</sup> learning goal with active language that highlights what you expect from students.
<b>How, Where, and When Assessed</b>	Students are assessed throughout the program using exit exams for most classes, a selection of assignments that are evaluated by individual instructors and shared with the Graduate Coordinator, graduate seminar presentations, Supplemental Instruction, or teaching evaluations, and theses.
<b>Expectations</b>	Expectations are clear.
<b>Results</b>	The program's report indicates that it is meeting and exceeding expectations for all learning goals.
<b>How Results Will be Used</b>	Individual results are shared with the student. Results are used to identify students who may be struggling. Results are shared with the graduate faculty and Department Chair.
<b>Recommendations</b>	The data presented indicates that all students are meeting or exceeding expectations. The program offers opportunities for student assessment in every class. Further, as is the case with other graduate programs, you have used assessment to address student performance that does not meet program expectations. Your seminar has been identified as an important class for strengthening communication and teaching skills. As your program continues to evaluate future directions, as requested by the provost in April 2020, your assessment tools and evaluation methods may change as well to assess student learning. A number of graduate programs use exit interviews or surveys successfully, which you may consider implementing in the future. Your next assessment effort will be interesting to see given the provost's request for a reevaluation and potential reconceptualization of your current program.

The Council on Graduate Studies approved of revised learning goals on December 8, 2020, which included the addition of an Ethical and Professional Responsibility learning goal. Please consult with your graduate faculty members to determine how to incorporate this learning goal into future assessment activities.