

STUDENT LEARNING ASSESSMENT PROGRAM SUMMARY FORM AY 2017-2018

Degree and
Program Name:

MA – Mathematics (Mathematics Education)

Submitted By:

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Please use size 10 font or larger.

Please complete a separate worksheet for each academic program (major, minor) at each level (undergraduate, graduate) in your department. Worksheets are due to CASA this year by **June 15, 2016**. Worksheets should be sent electronically to kjsanders@eiu.edu and should also be submitted to your college dean. For information about assessment or help with your assessment plans, visit the Assessment webpage at <http://www.eiu.edu/~assess/> or contact Karla Sanders in CASA at 581-6056.

PART ONE

What are the learning objectives?	How, where, and when are they assessed?	What are the expectations?	What are the results?	Committee/ person responsible? How are results shared?
1. Students will demonstrate an understanding of advanced mathematical content knowledge in areas as identified by AMATYC ¹ and NCTM ² standards.	1) Summative Grades from required mathematics content coursework (homework, exams, and projects). Courses: MAT 4810/5810, MAT 5635, MAT 5335, or other allowable mathematics content elective.	Coursework will be completed with a grade of at least a B. Graduate coordinator will meet with faculty assigned to teach course to discuss any perceived content deficiencies. If needed, deficiencies will be addressed through supplemental work as determined by both the graduate coordinator and faculty teaching the content course.	1) MAT 5152 (5 students): 5 As MAT 5335/5810 (6 students): 6 As	Graduate mathematics faculty assigned to teach specific courses. Graduate coordinator. Results disseminated to Mathematics Education Graduate Committee
2. Students will demonstrate critical thinking and problem-solving skills	2) Assessment Rubrics for Mathematics content course Courses: MAT 4810/5810, MAT 5635, MAT 5335, or other allowable mathematics content elective	Items are scored 1-4 4 = Exceed Expectations 3 = Meets Expectations 2 = Approaching Expectations 1 = Unacceptable It is expected that all students meet or exceed expectations. The graduate coordinator will meet with students showing deficiencies to develop an		Graduate mathematics faculty assigned to teach specific courses. Graduate coordinator. Results disseminated to departmental Mathematics Education Graduate Committee

		action plan.		
	1. The graduate candidate demonstrates a depth of content knowledge in the discipline.		MAT 5152: All Student met or exceeded expectations MAT 5335: All Students met or exceeded expectations	
	2. The graduate candidate demonstrates evidence of critical thinking and problem solving.		MAT 5152: All Student met or exceeded expectations MAT 5335: All Students met or exceeded expectations	
	3. The graduate candidate demonstrates the ability to develop convincing arguments and critique the reasoning of others.		MAT 5152: All Student met or exceeded expectations MAT 5335: All Students met or exceeded expectations	
	4. The graduate candidate demonstrates effective written communication skills.		MAT 5152: All Student met or exceeded expectations MAT 5335: All Students met or exceeded expectations	
	5. The graduate candidate demonstrates effective oral communication skills.		MAT 5152: All Student met or exceeded expectations MAT 5335: All Students met or exceeded expectations	
3. Students will practice, apply, and reflect on ethics, technology use, new pedagogical ideas, techniques and practices related to mathematics education as identified by the NCTM professional development standards	1) Summative Grades from completion of required education and mathematics education coursework (homework, exams, and projects). Courses: MAT 5400, MAT 5500, MAT 5700	Coursework will be completed with a grade of at least a B. Graduate coordinator will meet with faculty assigned to teach course to discuss any perceived content deficiencies. If needed, deficiencies will be addressed through supplemental work as determined by both the graduate coordinator and	MAT 5500 (2 students) 2 As	Graduate mathematics education faculty assigned to teach specific courses. Graduate coordinator collects and compiles the data.

		faculty teaching the content course.		
	2) Assessment Rubric for Math Education Coursework Courses: MAT 5400, MAT 5500, MAT 5700	<p>Items are scored 1-4 4 = Exceed Expectations 3 = Meets Expectations 2 = Approaching Expectations 1 = Unacceptable</p> <p>It is expected that all students meet or exceed expectations. The graduate coordinator will meet with students showing deficiencies to develop an action plan.</p>		<p>Graduate mathematics faculty assigned to teach specific courses.</p> <p>Graduate coordinator.</p> <p>Results disseminated to dept Education Graduate Comm</p>
	1. The graduate candidate demonstrates critical reflection on research and its impact on practice		MAT 5500: All student met or exceeded expectations	
	2. The graduate candidate demonstrates knowledge of pedagogical techniques related to student engagement, communication, and problem solving.		MAT 5500: All student met or exceeded expectations	
	3. The graduate candidate demonstrates knowledge of the diversity of student thinking and development.		MAT 5500: All student met or exceeded expectations	
	4. The graduate candidate demonstrates knowledge of the nature of mathematics proficiency		MAT 5500: All student met or exceeded expectations	
	5. The graduate candidate demonstrates a facility with technological tools as a means to solve problems and enhance mathematical thinking.		MAT 5500: All student met or exceeded expectations	
	6. The graduate candidate		MAT 5500:	

	demonstrates effective written communication skills.		All student met or exceeded expectations	
	7. The graduate candidate demonstrates effective oral communication skills.		MAT 5500: All student met or exceeded expectations	
4. Students will demonstrate effective writing skills and ethics in the field through reviewing and conducting research in the field of mathematics education	<p>1) Completion of a literature review (in course MAT 5410) and completion of action research project for the independent study/thesis program requirement.</p> <p>2) The action research project is assessed across four categories using the 'Action Research Project Rubric' by the independent study advisor. The Graduate committee reviews, but does not assess all finished action research projects.</p> <p>3) The unit lesson plan Project is assessed using the "Unit Lesson Plan Project rubric" by the independent study advisor.</p>	<p>Literature review will compile appropriate, relevant, and recent research in the field.</p> <p>Action research project will demonstrate the ability to design a study that either tests a hypothesis or measures the results of a treatment. The action research project must obtain the level of 'Advanced' or higher in all four categories assessed.</p> <p>Unit Lesson Plan project will demonstrate the ability of the candidate to reflect on the content learned in the program and adapt it to their instructional setting. The unit lesson plan must obtain the level of meets or exceeds expectations on all categories</p>	<p>1) MAT 5410 was taught in Sum 2017. Of the 7 enrolled, 6 successfully completed the literature review and submitted a research proposal that met or exceeded expectations. The remaining student submitted a proposal that was deemed unacceptable. This student has been assigned to an advisor who is supervising the revision of the proposal.</p> <p>2) Of the 6 students who submitted action research proposals, 3 have completed the project at this point in 2018. All were completed at advanced or higher level in all categories. The remaining are making progress (typically students collect data during the school year and finish the writing in the summer, so it is not uncommon for these to not be complete at this point in the summer)</p> <p>3) 4 Unit lesson plans were implemented, all scored at the meets or exceeds level.</p>	<p>Graduate mathematics education faculty are assigned to teach MAT 5410 and direct independent studies. The Graduate committee approves and reviews independent studies/theses.</p> <p>Graduate coordinator collects and compiles the data.</p>
5. Students will demonstrate effective oral and written	1) The action research project presentation or manuscript is	Presentation of the action research project in an	1) Two projects were presented in Summer 2016	Independent study advisor rates the

skills through a presentation of their action research projects.	assessed using one category on the 'Action Research Project Rubric' by the independent study advisor. A rating of 'Advanced' or higher is expected.	appropriate venue –or- preparation of a manuscript based on the action research project for submission to an appropriate journal	at the advanced or higher level.	presentation. Graduate coordinator coordinates presentations and manuscripts.
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(Continue objectives as needed. Cells will expand to accommodate your text.)

PART TWO

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.

We have continued to use the ongoing assessment of teacher candidates using the “Graduate Student Assessment for Mathematics content course” rubric and the “Graduate Student Assessment for Mathematics Education course” rubric. Exit Interviews were not conducted because we did not have any students graduate during the last assessment period. In this summer, we expect to have several students finishing, so we will be able to implement the exit interview this summer, to be reported in the next assessment report.

PART THREE

*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?*

While the introduction of the new secondary education option focusing on dual credit has been very popular, nearly all of our students have opted to go into this option highlighting that it is filling a need, we have still struggled in attracting new students to the program. Last summer we had only one new student, and this summer we similarly have only one new student. Because of this dire situation, we are taking efforts to rethink the program and how we can reach more potential students. Due to EIU having become a dual credit provider, we have drastically increased our online offerings for math content courses to support the teachers in that school district. This has an impact on our graduate program as our Masters candidates take these courses as well. Since we plan to offer a similar slate of online content courses next summer, we would like to capture this momentum and begin to transition some of the math education courses to be taught online as well. Currently, we plan to adapt MAT 5300 (Curriculum and Assessment in Mathematics education) and MAT 5700 (Topics in teaching Secondary Mathematics) to online courses for next summer. In order to measure the effectiveness of this change, we will need to adjust our assessment program to collect appropriate data. During the 2018/19 term, the Graduate Faculty in Mathematics Education will meet to discuss what changes need to be made.