***STUDENT LEARNING ASSESSMENT PROGRAM***

***SUMMARY FORM AY 2018-2019***

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 17, 2019**. 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.

MA – Mathematics (Mathematics Education)

**Degree and**

**Program Name:**

# Submitted By:

**Peter Wiles**

**Please use size 10 font or larger.**

**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 AMATYC1 and NCTM2 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 5200 (2 students): 2 AsMAT 53351 (2 students):2 BsMAT 53353 (2 students):2 Bs | 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 courseCourses: MAT 4810/5810, MAT 5635, MAT 5335, or other allowable mathematics content elective | Items are scored 1-44 = Exceed Expectations3 = Meets Expectatiosn2 = Approaching Expectations1 = UnacceptableIt is expected that all students meet or exceed expectations. The graduate coordinator will meet with students showing deficiencies to develop an action plan. |  | Graduate mathematics faculty assigned to teach specific courses. Graduate coordinator.Results disseminated to departmental Mathematics Education Graduate Committee |
|  | 1. The graduate candidate demonstrates a depth of content knowledge in the discipline. |  | MAT 5200:All Student met or exceeded expectationsMAT 53351:All Students met or exceeded expectationsMAT 53353:All Students met or exceeded expectations |  |
|  | 2. The graduate candidate demonstrates evidence of critical thinking and problem solving. |  | MAT 5200:All Student met or exceeded expectationsMAT 53351:All Students met or exceeded expectationsMAT 53353:All Students met or exceeded expectations |  |
|  | 3. The graduate candidate demonstrates the ability to develop convincing arguments and critique the reasoning of others. |  | MAT 5200:All Student met or exceeded expectationsMAT 53351:All Students met or exceeded expectationsMAT 53353:All Students met or exceeded expectations |  |
|  | 4. The graduate candidate demonstrates effective written communication skills. |  | MAT 5200:All Student met or exceeded expectationsMAT 53351:All Students met or exceeded expectationsMAT 53353:All Students met or exceeded expectations |  |
|  | 5. The graduate candidate demonstrates effective oral communication skills. |  | MAT 5200:All Student met or exceeded expectationsMAT 53351:All Students met or exceeded expectationsMAT 53353: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 faculty teaching the content course. | No Mathematics Education Coursework Offered in Summer 2018 | Graduate mathematics education faculty assigned to teach specific courses.Graduate coordinator collects and compiles the data. |
|  | 2) Assessment Rubric for Math Education CourseworkCourses: MAT 5400, MAT 5500, MAT 5700 | Items are scored 1-44 = Exceed Expectations3 = Meets Expectations2 = Approaching Expectations1 = UnacceptableIt is expected that all students meet or exceed expectations. The graduate coordinator will meet with students showing deficiencies to develop an action plan. | No Mathematics Education Coursework Offered in Summer 2018 | Graduate mathematics faculty assigned to teach specific courses. Graduate coordinator.Results disseminated to department chair and departmental Mathematics Education Graduate Committee |
|  | 1. The graduate candidate demonstrates critical reflection on research and its impact on practice |  | n/a |  |
|  | 2. The graduate candidate demonstrates knowledge of pedagogical techniques related to student engagement, communication, and problem solving. |  | n/a  |  |
|  | 3. The graduate candidate demonstrates knowledge of the diversity of student thinking and development. |  | n/a  |  |
|  | 4. The graduate candidate demonstrates knowledge of the nature of mathematics proficiency  |  | n/a  |  |
|  | 5. The graduate candidate demonstrates a facility with technological tools as a means to solve problems and enhance mathematical thinking. |  | n/a |  |
|  | 6. The graduate candidate demonstrates effective written communication skills. |  | n/a  |  |
|  | 7. The graduate candidate demonstrates effective oral communication skills. |  | n/a  |  |
| 4. Students will demonstrate effective writing skills and ethics in the field through reviewing and conducting research in the field of mathematics education | 1) Completion of a literature review (in course MAT 5410) and completion of action research project for the independent study/thesis program requirement.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.3) The unit lesson plan Project is assessed using the “Unit Lesson Plan Project rubric” by the independent study advisor.  | Literature review will compile appropriate, relevant, and recent research in the field. 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.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 | 1) MAT 5410 was not offered in summer 2018, so no proposals or literature reviews were completed.2) Two students completed their action research project in this time period. All were completed at advanced or higher level in all categories. 3) 2 Unit lesson plans were implemented; all scored at the meets or exceeds level. | Graduate mathematicseducation faculty areassigned to teach MAT 5410 and direct independent studies. The Graduate committee approves and reviews independent studies/theses.Graduate coordinator collects and compiles the data. |
| 5. Students will demonstrate effective oral and written skills through a presentation of their action research projects. | 1) The action research project presentation or manuscript is assessed using one category on the ‘Action Research Project Rubric’ by the independent study advisor. A rating of ‘Advanced’ or higher is expected. | Presentation of the action research project in an appropriate venue –or- preparation of a manuscript based on the action research project for submission to an appropriate journal | 1) No projects were presented in summer 2018, our annual graduate research day was cancelled due to current low enrollment. | Independent study advisor rates the presentation.Graduate coordinator coordinates presentations and manuscripts.  |

1AMATYC stands for American Mathematics Association of Two Year Colleges.

2NCTM stands for National Council of Teachers of Mathematics

(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. We had two students complete their masters in the 2018-2019 year. While exit surveys indicated that these students felt very satisfied with the program and the department, they were concerned about the health of the program due to low enrollment numbers. It is our concern that our past success in recruiting teachers from the region has resulted in a vacuum of math teachers in the area needing advanced degrees. While we realize that these trends are cyclical, we recognize the need to expand the scope of our program beyond the region. Our plans for making the program fully online continue, but have not yet born fruit.

**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?*

As alluded to above, our attempt to offer online mathematics education courses in summer 2018 were not successful. Both courses were cancelled due to low enrollment. As such, we don’t have any assessment data to rely on with regards to our mathematics education curriculum and how it might look in an online form. When we are able to successfully run these courses, we will be giving a detailed survey to the students enrolled to gather information about their experiences. In planning for next summer, the graduate faculty will be meeting regularly during the academic year to reassess program and decide whether it being fully online will require changes. For example, it is unclear if the program will remain a primarily summer program, or move to become year-round.