III. Program Profile

____New Program Application __x_ Program Renewal

Name of Program: Mathematics Education

Certificate Level: 8-12

Date submitted: September 14, 2014

EPP Submission Coordinator:

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Program Type: Initial Certificate Graduate Level

Program Route: Traditional

Degree or Award Level: Master's

Status: Non-profit IHE

Program Sites: Main/Residential Campus

Delivery Modes: Hybrid

Program Experiences:

The curriculum in the Mathematics Education program includes the following required coursework. A syllabus for each course is located in Folder 1: Program Experiences, Sub-folder 2: Syllabi. Operational course descriptions are located in Folder 1: Program Experiences, Sub-folder 3: Regulation Compliance Documentation, 2nd level sub-folder b: Program Specific Compliance Documents.

Course	Hrs.	Title
SEM 631	3	Mathematics Pedagogy in the Secondary School
EDC 637	1	Classroom Management in Secondary Education
EDC 638	1	Technology Education
EDC 639	1	Multicultural Education
SEM 746	9	Subject Area Instruction (Math) in the Secondary School

EPE 602 (*formerly EPE 773)*	1	Social Policy Issues and Education: Education in American Culture
SEM 770	3	Special Topics in STEM Education: Foundations of Pedagogical Theory in STEM Education
EDS 604	1	Special Education for Secondary Education
EDP 658	1	Problems in Educational Psychology: Major Theories of Learning in Education
ELS 691	1	Legal Perspectives for Teachers
EDC 533	3	Teaching Literacy across Disciplines (required elective course)
ELECTIVE	3	<candidate choice with advisor input> (Example SEM 704)
ELECTIVE	3	<candidate choice with advisor input> (Example SEM 708)
TOTAL HOURS	**31**	

Curriculum Contract/Guidesheet:

See Folder 1: Program Experiences, Sub-folder 1: Curriculum Contract and Guidesheets.

Clinical Educators (all IHE faculty who prepare educators in this program):

See Folder 2: Program Clinical Educators, Sub-folder 1: Clinical Educators Summary Table and Sub-folder 2: Clinical Educators Vitae.

Clinical Educators (all faculty who prepare educators in this program):

Name	Highest Degree Earned, Field or Specialty Area of highest degree*	Teaching Assignment or role in this program	P-12 Certifications Held, if any	P-12 experiences including teaching or administration and dates of engagement in these roles	Status to IHE and Program (FT-Full-time, PT-Part-time)			
					IHE		Program	
					FT	PT	FT	PT

Cohort Data:

See Folder 3: Cohort Data. This folder is populated with a series of Excel Spreadsheets that identify the candidates who were admitted to the program by cohort year, starting in 2008. The Excel worksheets were created in September 2014 and provide a snapshot of the cumulative status for candidates who were enrolled in that specific year, i.e., 2008-2009, 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014.

Cohort Year: Sept 1 – Aug 31	Admitted to Program in 2008-2009		Program Completion by August 31, 2014	
	Men	Women	Men	Women
Hispanic/Latino of any race				
American Indian or Alaska Native				
Asian				
Black or African American				
Native Hawaiian or Other Pacific Islander				
White				
Two or more races				
Nonresident Alien				
Unknown				
TOTAL				

Assessment Table:

See Folder 4: Assessment. Note that the Assessment Standards Alignment Tables are located in Sub-folder 1: Standards Alignment Documents, 2nd Level Sub-folders for alignment of the assessments with the Kentucky Teacher Standards and the SPA standards.

Number and Type of Assessment	Form of Assessment	Course(s)	When in the program is this assessment administered (beginning, middle, end)	Kentucky Performance Standards Alignment (must specify which standards and include all ten within the table)
Assessment #1: Content Assessment				
Assessment #2: Other Assessment of Content Knowledge				
Assessment #3: Assessment of Professional Capabilities				
Assessment #4: Clinical Experiences Measure of Teaching Proficiency				
Assessment #5: Measure of Candidate Assessment Proficiencies				

Assessment #6: Candidate ability to diagnose and prescribe for personalized Student Learning				
Assessment #7: Application of Content Knowledge and Pedagogical Skills (Instructional Practice)				
Assessment #8: Assessment of Literacy Outcomes				

Assessments aligned to Standards:

The program is aligned with the National Council of Teachers of Mathematics/National Council for Accreditation of Teacher Education Secondary Mathematics Education Performance Standards (2012). See Folder 4: Assessment, Sub-folder 1: Standards Alignment Documents, 2nd Level Sub-folders for alignment of the assessments with the Kentucky Teacher Standards and the National Council of Teachers of Mathematics/National Council for Accreditation of Teacher Education Secondary Mathematics Education Performance Standards (2012).

FOR PROGRAM RENEWAL ONLY

Data Report and Use of Data Analysis:

Data are reported in the Sub-folders for each of the eight assessment areas. There are three 2nd level Sub-folders for each assessment: (a) Assessment Instrument and Documentation, (b) Data Tables, and (c) Data Analysis and Discussion.

Data are summarized in Folder 5: Data Report and Use of Data. There are two 2nd level Sub-folders in the Data Report and Use of Data Folder: (1) Summary Discussion of Assessment and (2) Use of Assessment Results for Program Improvement.

Description of the Clinical Model and Summary of the Experiences:

A description of the clinical model in the Mathematics Education program can be found in Folder 6: Clinical Model and Experiences, Sub-folder 1: Program Clinical Model Overview, and Sub-folder 2: Program Clinical Experiences Detail by Course. Folder 7: Responsibility of University Personnel for Student Teaching Supervision includes documentation of clinical elements of student teaching in the Mathematics Education program. Folder 8: Field and Clinical Practice (initial only) includes documentation of policies and procedures at UK ensuring compliance with regulations regarding field experiences, as well as program-specific description of field experience requirements in the program.

Responsibilities for University Personnel involved in Clinical Supervision of Student Teaching as required by 16 KAR 5:040 Section 5:

Has the program ensured the university supervisor	Yes	No
a) demonstrates effective classroom management techniques that promote an environment conducive to learning.	X	
b) demonstrates best practices for the delivery of effective instruction.	X	
c) demonstrates dispositions that contribute to the mentoring and development of a pre-service educator.	X	
d) demonstrates knowledge and skills in the use of formative and summative assessments.	X	
e) demonstrates the ability to participate in a community of professionals committed to supporting the effective instructional practice of each student teacher.	X	
f) has made periodic on-site observations of the student teacher in the actual teaching situation (minimum of four)	X	
g) has prepared a written report on each observation	X	
h) has shared each report with the student teacher	X	

Initial Certification Programs

a) **How many pre-student teaching field/clinical hours are required of candidates in this program?**
275 **Minimum of 200 hours required by 16 KAR 5:040**

b) How does the program ensure candidates have experiences at each of the three levels (elementary, middle, and high) and other experiences as outlined in 16 KAR 5:040 Section 3(3)?

In accordance with 16 KAR 5:040, prior to student teaching, candidates will gain a minimum of 200 hours of electronically documented field experiences through a minimum of two informal school settings and three formal school settings. At least one of these experiences will be at an elementary school or with elementary-aged children, at least one will be at a middle school or with middle school aged children, and at least two at the secondary school level. A formal school setting is defined as during the school day with a highly qualified supervising teacher. An informal school setting is defined as after school or out-of-school activities and opportunities for which the candidate engages with the appropriate population in education-related activities and is not paid for their time.

Candidates participate in an Elementary STEM Day during which they set up booths and work with elementary students to show them the wonderful world of mathematics. Candidates are also placed at either a middle school or high school to work with struggling mathematics students. Documentation of these experiences is recorded in the OTIS Assessment System.

c) How does the program prepare and provide opportunities for each candidate to co-teach?

Each candidate will be placed in a classroom with a highly-qualified and trained cooperating teacher. Within that student teaching placement, the student teacher and cooperating teacher will have the opportunity to and be expected to utilize each of the co-teaching strategies (St. Cloud, 2009) on a regular basis. The Mathematics Education program defines a regular basis as 2-3 strategies per week. Co-teaching experiences are documented through the OTIS Online Assessment System, the Kentucky Field Experiences Tracking System, and candidates' regular reflections on their student teaching experiences.

- **One Teach, One Observe** – one teacher has primary instructional responsibility while the other gathers specific observational information on students or the (instructing) teacher. The key to this strategy is to focus on the observation – where and how the teacher is doing the instruction and observing specific behaviors. It is important to remember that either the teacher candidate or the cooperating teacher could take on both roles.
- **One Teach, One Assist** is an extension of one teach, one observe. One teacher has primary instructional responsibility while the other assists students with their work, monitors behaviors, or corrects assignments, often lending a voice to students or groups who would hesitate to participate or add comments.
- **Station Teaching** occurs when the Co-Teaching pair divides the instructional content into parts –Each teacher instructs one of the groups, groups then rotate or spend a designated amount of time at each station – often independent stations will be used along with the teacher led stations.
- In the **Parallel Teaching** approach, each teacher instructs half the students. The two teachers are addressing the same instructional material and presenting the material using the same teaching strategies. The greatest benefit to this method is the reduction of the student to teacher ratio.
- The **Supplemental Teaching** strategy allows one teacher to work with students at their expected grade level, while the other teacher works with those students who need the information and/or materials re-taught, extended, or remediated.
- **Alternative or Differentiated Teaching** strategies provide two different approaches to teaching the same information. The learning outcome is the same for all students however the avenue for getting there is different.
- **Team Teaching** incorporates well planned, team taught lessons, exhibiting an invisible flow of instruction with no prescribed division of authority. Using a team teaching strategy, both teachers are actively involved in the lesson. From a students' perspective, there is no clearly defined leader – as both teachers share the instruction, are free to interject information, and available to assist students and answer questions.

d) **How many days is the student teaching experience for this program? _____70_____**
Minimum of 70 days required by 16 KAR 5:040

e) Does the program ensure candidates complete the following student teaching experiences required by 16 KAR 5:040 Section 6?

	Yes	No
Assume major responsibility for the full range of teaching duties, including extended co-teaching experiences, in a real school situation under the guidance of qualified personnel from the EPP and the partner school.	**X**	
Provide opportunities for the student teacher to develop and demonstrate the practical skills, knowledge, and professional dispositions essential to help all P-12 students learn and develop.	**X**	
Collaborate with the district in determining the specific placement of the student teacher.	**X**	
Collaborate with the district to provide necessary program resources and expertise.	**X**	
Use multiple performance assessments to document the student teacher's ability to support learning for all students.	**X**	
Require the use of technology to enrich student learning and support the student teacher's professional growth and communication	**X**	
Provide opportunities for the student teacher to: **a) Engage in extended co-teaching experiences with an experienced teacher.**	**X**	
b) Engage in reflective self-assessment that informs practice.	**X**	
c) Maintain regular professional conversations with experienced teachers other than the cooperating teacher.	**X**	
d) Participate in regular and extracurricular school activities.	**X**	
e) Participate in professional decision making.	**X**	
f) Engage in collegial interaction and peer review with other student teachers.	**X**	
g) Use TPA tasks or variation of these tasks to document student teacher's skills	**X**	

f) What percentage of teacher candidates admitted to student teaching satisfactorily completed student teaching beginning with the most recent academic year?

Academic Year	# of Candidates who started Student Teaching	# of Candidates who Satisfactorily Completed Student Teaching	Percentage of Candidates who Completed Student Teaching
2014-15	18		
2013-14	6	6	100%
2012-13	15	15	100%

Kentucky P-12 Curriculum Requirements (include links to specific section(s) in syllabi for evidence):

Briefly describe how candidates use the Kentucky P-12 Curriculum requirements (e.g., KCAS) and the Kentucky P-12 school assessment system (e.g., K-PREP) to guide instruction.

See Folder 9: Kentucky Curriculum Requirements, Sub-folder 1: KY Curriculum and Assessment Tools Integration and Use, for a description of integration of Unbridled Learning initiatives in the Mathematics Education program.

Provide evidence (TPA/portfolio/other data) of candidates' use of the Kentucky P-12 Curriculum requirements in lesson plans (include lesson plan format if not using the current KTIP format).

The KTIP TPA lesson plan format is used in the Mathematics Education Program. In 2014-2015, the new KTIP/PGES lesson plan format will be used. See Folder 9: Kentucky Curriculum Requirements, Sub-folder 2: KY Curriculum Requirements, Use in Lesson Planning, for a description of candidates' use of the Kentucky P-12 curriculum requirements in lesson planning.

Optional: Program-Initiated Innovations:

See Folder 10: Program-Initiated Innovations for an overview of recent revisions to the Mathematics Education Program.

REJOINDER TO REVIEWER FEEDBACK – April 8, 2015

MATHEMATICS GRADES 8-12 (Master's)

1) Not all syllabi demonstrate alignment with the conceptual framework.

All syllabi were updated to demonstrate alignment with the conceptual framework. Folder 1: Program Experiences → Subfolder 2: Syllabi

2) The Program Profile includes information for only 22 required credit hours; however, the curriculum contract/guidesheet lists 31 required credit hours.

The curriculum guide sheet was updated to accurately reflect course titles and the program profile was updated to include the 9 hours of elective courses originally missing from the core class list. Folder 1: Program Experiences → Subfolder 1: Curriculum Contract and Guides

The Program Profile sheet was updated to accurately reflect course titles and correct hours.

3) The teaching of writing is not addressed.

The teaching of writing is further addressed beyond the two assessment instruments in a separate document in Folder 4: Assessment → subfolder 9: Assessment 8: Literacy Across the Disciplines Outcomes → 2nd subfolder a: Assessment Instrument Documentation

4) Specific field experience assignments by course are not illustrated.

Specific field experience assignments by course are found in Folder 6: Clinical Model and Experiences → Subfolder 2: Program Clinical Experiences Detail by Course. Please note that in this program all field experiences take place in SEM 770 which is detailed in this document.

5) The Field Experience Activities document references EPSB rules. The regulations are the result of legislative action, not EPSB rules.

The Field Experience Activities document has been updated to state EPSB regulations as opposed to EPSB rules. Folder 8: Field and Clinical Practice, initial only → Subfolder 1: Unit Policies and Requirements

6) No syllabus for EPE 602 was provided.

A syllabus for EPE 602/773 has been provided. Folder 1: Program Experiences → Subfolder 2: Syllabi

7) Some syllabi reference outdated KDE terminology and practices.

All syllabi were updated to reference current KDE terminology and practices. Folder 1: Program Experiences → Subfolder 2: Syllabi

8) The faculty matrix does not identify a teaching assignment for EPE 602. NOTE: EPE is omitted from the matrix but is identified as a required course (in Program Profile).

The faculty matrix has been updated to include EPE 602/773. Folder 2: Program Clinical Educators → Subfolder 1: Clinical Educators Summary Table

The vitae for the instructor for EPE 602/773 has been provided. Folder 2: Program Clinical Educators → Subfolder 2: Clinical Educators Vitae

9) Page 2 of the curriculum contract states "teaching of high school science" in the narrative introducing the Admission Criteria.

The curriculum guide sheet was updated to accurately reflect mathematics in the admission criteria. Folder 1: Program Experiences → Subfolder 1: Curriculum Contract and Guides

10) The curriculum contract/guidesheet includes multiple discrepancies: 1) document states 25 credits hours required for initial Fall/Spring semesters; however, the courses listed with credit hours assigned total 22 hours; 2) final 9 hours of coursework required for the final Fall semester doesn't reflect that these 9 hours may be electives or suggested courses depending on candidate's goals; 3) course titles/numbers on the contract do not match with the course titles/numbers listed in the program profile (i.e., EPE 602/773, EDS 604, SEM 770).

1. *The curriculum guide sheet was updated to accurately reflect the correct credit hours. Folder 1: Program Experiences → Subfolder 1: Curriculum Contract and Guides*
2. *The curriculum guide sheet was updated to accurately reflect the elective credit hours including 1 required elective to meet the EPSB writing across the disciplines requirement and 2 candidate choice electives. Folder 1: Program Experiences → Subfolder 1: Curriculum Contract and Guides*
3. *The curriculum guide sheet was updated to accurately reflect the correct course titles and numbers in the program profile. Folder 1: Program Experiences → Subfolder 1: Curriculum Contract and Guides*

11) The contract/guidesheet does not specify that an undergraduate degree is required for admission to the program. This does not match what is stated in the Admissions/Retention Policy document.

The curriculum guide sheet was updated to clarify the requirement of an undergraduate degree and major in mathematics or equivalent of a major in mathematics. Folder 1: Program Experiences → Subfolder 1: Curriculum Contract and Guides