**Oklahoma Commission for Teacher Preparation**

**Program Report for the**

**Preparation of Secondary Mathematics Teachers**

**C O V E R S H E E T**

**Institution St. Gregory’s University** **State**

**Date submitted September 12, 2012**

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**Program documented in this report:**

**Name of institution’s program (s) Secondary Mathematics Education**

**Grade levels for which candidates are being prepared Secondary**

**Degree or award level Bachelor of Science**

**Is this program offered at more than one site? □ Yes X No**

If yes, list the sites at which the program is offered

**Title of the state license for which candidates are prepared**

Advanced Mathematics

**Program report status:**

* **Initial review**

**🞏New Program**

**🞏Existing Program**

* **Response to One of the Following Decisions: Further Development Required or Recognition with Probation**
* **Response to Recognition With Conditions**

**Is your unit seeking:**

**🞎 State accreditation for the first time (initial accreditation)**

**X Continuing State accreditation**

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**SECTION I—CONTEXT**

**Provide the following contextual information:**

1. Description of any state or institutional policies that may influence the application of SPA standards.

2. Description of the field and clinical experiences required for the program.

1. St. Gregory’s University offers a liberal arts education in the Catholic and Benedictine tradition. Therefore there is a core component to all degree programs in which students explore the ways of knowing in a variety of disciplines and meet the thinkers who have shaped Western civilization through a series of four Tradition and Conversation (Great Books) seminars. Building on that basis, education programs are designed to support development of Oklahoma’s fifteen competencies for licensure. In addition, St. Gregory's University (SGU) has added institutional competencies which address 1) knowledge of the Catholic perspective in education, and 2) practice in reflection. To attain licensure, teachers in Oklahoma take three professional exams that address general education (Oklahoma General Education Test, OGET), discipline knowledge (Oklahoma Subject Area Test, OSAT), and pedagogy (Oklahoma Professional Teaching Examination, OPTE). These requirements impact the design of the program, and both complement and reinforce the application of OKLAHOMA standards.

2. The St. Gregory's University Teacher Education program uses a multi-level approach to **field experiences**. Students complete a minimum of 75 hours of field experience before the student teaching experience. During these field experiences the teacher candidate observes the actions of others and his/her own actions in the classroom and then reflects upon those observations to grow in professional confidence and expertise. This model of study, practice, and reflection is supported in the writings of Donald Schön (1991), who points out:

Designing [learning experiences] must be learned by doing. However much students may learn about designing from lectures or readings, there is a substantial component of educational design competence - indeed - the heart of it - that they cannot learn in this way. A quality educational practice is learnable but is not teachable by classroom methods. And when students are helped to learn this quality, the interventions most useful to them are more like coaching than teaching - as in reflective practice.

Thus, the St. Gregory's University Teacher Education program designs field experiences linked to specific coursework for teacher candidates, which provides the occasion for discussion of the teaching actions and sharing of field experience summaries.

|  |  |
| --- | --- |
| **Field Experiences Linked to Specific Coursework** | **Secondary Majors’ Hours/ Category** |
| ED 3012 Foundations of Teaching | 15- Observation |
| TH 3201 Catholic Perspectives in Education | 10- Observation/directed assistance- Catholic setting |
| ED 3022 Middle Level Education | 15- Observation/directed assistance- Middle level school |
| MA 3263- Methods of Teaching Secondary/Middle Level Math | 15- directed assistance and supervised assistance |
| PY4132 Psychology of Students with Exceptionalities | 10- Observation/directed assistance-  Special Education |
| Professional Development/ Extracurricular Activities | 10 |
| Total Hours | 75 |

The Teacher Education program of study was designed and sequenced to provide field experience at multiple levels of competency development in order to provide a thorough practice-base for reflection. Students are required to complete field experiences each semester while in the program, beginning with the freshman or sophomore year. The experiences were organized in six categories: (1) observations, (2) directed assistance, (3) supervised assistance, (4) supervised unit instruction, (5) supervised full responsibility, and (6) professional development. Each teacher candidate is directed through each level and area to experience general and specific activities in order to achieve as thorough and sequentially appropriate a set of experiences as possible before entering student teaching. Each teacher candidate keeps a journal record of experiences to be used for personal notes and reflection as well as for topics of discussion with peers and mentors.

The Reflective Practitioner Teacher Education program at St. Gregory's University reflects a high value on early systematic field experiences in a range of school setting and with a variety of students of varying cultural, socioeconomic, racial and ethnic backgrounds, including students with special needs. Field experiences include the following:

• At least one experience in an urban school, one in a surburban, and one in a rural school

• At least one experience in a school with a high multicultural population

• At least one experience in a school with a varied socioeconomic population

• At least one experience in a non-school educational program

**Student Teaching** is a twelve week (60 days) placement during the senior year.  This capstone experience calls for the pre-service teacher to work with a cooperating teacher in order to teach. The pre-service teacher may choose to spend all twelve weeks at one location. The cooperating teacher agrees to have the pre-service teacher carry responsibility for the classroom for at least ten of the twelve weeks. This cooperating teacher works closely with the pre-service teacher, mentoring on a daily basis. Supervision of the pre-service teacher comes from a University Supervisor with public school experience in the content area of the pre-service teacher’s specialization. The University Supervisor will visit the classroom at least four times during the teaching experience. The pre-service teacher meets in a face-to-face conference with the University Supervisor at each visit The University Supervisor also communicates with the cooperating teacher and the principal of the school in which the pre-service teacher is placed. Finally, the University Supervisor provides written feedback to the pre-service teacher and to the Associate Dean of Education following each visit.

During the student teaching semester, the pre-service teacher also enrolls in ED 4322 Student Teaching Seminar for which the pre-service teacher uses the internship placement to develop Student Learning Impact Project (SLIP), by which student teachers assess their impact on a class learning experience. This is further described in Assessment #5 below.

(Source: St. Gregory's University Teacher Education Handbook)

**Attachments:**

1. A program of study that outlines the courses and experiences required for candidates to complete the program as a student advisement sheet showing course titles.. Attachment A:

**ATTACHMENT A**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **ST. GREGORY'S UNIVERSITY PROGRAM OF STUDY** | | | | | | | | | |
| **Bachelor of Natural Science** | | | | | | | | |
| **Major: 523-Secondary Math Education** | | | | | | | | |
| *For the 2012-2013 Academic Year* | | | | | | | | |
| Student Name: | |  | | | Date: |  | | |
|  | | | | | | | | |
| Student ID#: | |  | | | Advisor: |  | | |
|  | | | | | | | | |
| **COMMON CORE CURRICULUM (57 CREDITS)** | | | | | | | | |
|  | | | | | | | | |
| HU | 1101 | First Year Experience I | | | 1 |  |  |  |
| HU | 1112 | TC Seminar I | | | 2 |  |  |  |
| HU | 1122 | TC Seminar II | | | 2 |  |  |  |
| HU | 1201 | First Year Experience II | | | 1 |  |  |  |
| HU | 2112 | TC Seminar III | | | 2 |  |  |  |
| HU | 2122 | TC Seminar IV | | | 2 |  |  |  |
| HU | 2651 | Liberal Arts Core Seminar | | | 1 |  |  |  |
| EN | 1113 | English Composition I | | | 3 |  |  |  |
| EN | 1323 | English Composition II | | | 3 |  |  |  |
| CO | 1713 | Fundamentals of Speech or | | | 3 |  |  |  |
| BU | 2013 | Business & Professional Communications | | | |  |  |  |
| \_\_\_\_\_\_ | \_\_\_\_\_\_ | Fine Arts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | 3 |  |  |  |
| PH | 1013 | Introductory to Philosophy | | | 3 |  |  |  |
| PH/TH | \_\_\_\_\_\_ | Ethics (Philosophical, Business, Health | | |  |  |  |  |
|  |  | Care or Christian) | | | 3 |  |  |  |
| TH | 1323 | Introduction to Sacred Scripture | | | 3 |  |  |  |
| TH | 2413 | Introduction to Christian Theology | | | 3 |  |  |  |
| HI | 1483 | United States History (1492-1865) or | | |  |  |  |  |
| HI | 1493 | United States History (1865-Present) | | | 3 |  |  |  |
| PO | 1013 | Government of the U.S. | | | 3 |  |  |  |
| PY | 1113 | Elements of Psychology or | | | 3 |  |  |  |
| SO | 1113 | Intro to Sociology | | |  |  |  |
| MA | 2054 | \*Calculus I | | | 4 |  |  |  |
| LS | \_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | 3 |  |  |  |
| PS | 1113 | College Physics I | | | 3 |  |  |  |
| PS | 1111 | College Physics I Lab | | | 1 |  |  |  |
| KI | 1072 | Concepts of Wellness or | | | 2 |  |  |  |
| KI | \_\_\_\_\_\_ | Activity Course: \_\_\_\_\_\_\_\_\_\_\_\_\_ and | | |  |  |  |
| KI | \_\_\_\_\_\_ | Activity Course: \_\_\_\_\_\_\_\_\_\_\_\_\_ | | |  |  |  |
|  | | | | | | | | |
| **MATHEMATICS EDUCATION MAJOR (63 Credits)** | | | | | | | | |
| LS | \_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | 3 |  |  |  |
| PS | \_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | 3 |  |  |  |
| MA | 2153 | Calculus II | | | 3 |  |  |  |
| MA | 3013 | Elementary Statistics | | | 3 |  |  |  |
| MA | 3113 | Discrete Mathematics | | | 3 |  |  |  |
| MA | 3123 | Linear Algebra | | | 3 |  |  |  |
| MA | 3253 | Calculus III | | | 3 |  |  |  |
| MA | 3303 | Intro to Number Theory | | | 3 |  |  |  |
| MA | 3413 | Hist and Philosophy of Math | | | 3 |  |  |  |
| MA | 3263 | Methods of Teaching SecondaryML/Math | | | 3 |  |  |  |
| MA | 4313 | Abstract Algebra | | | 3 |  |  |  |
| MA | 4513 | College Geometry | | | 3 |  |  |  |
| PY | 3113 | Developmental Psychology or | | |  |  |  |  |
| PY | 4113 | Cognitive Psychology | | | 3 |  |  |  |
| PY | 4132 | Psy of Students with Exceptionalities | | | 2 |  |  |  |
| TH | 3201 | Catholic Perspectives in Education | | | 1 |  |  |  |
| ED | 3002 | Educational Technology | | | 2 |  |  |  |
| ED | 3012 | Foundations of Teaching | | | 2 |  |  |  |
| ED | 3022 | Middle Level Education | | | 2 |  |  |  |
| PY | 4223 | Tests and Measurement | | | 3 |  |  |  |
| ED | 4322 | Student Teaching Seminar | | | 2 |  |  |  |
| ED | 4920 | Student Teaching | | | 10 |  |  |  |
| \*If student does not meet Calculus prerequisite, they must take 1814 Pre-Calculus/Analytic Geometry | | | | | | | | |
| Foreign Language: 2 years HS of same language with a B or | | | | | [3] |  |  |  |
| better, or 2 semesters of college with a C or better, or CLEP Test | | | | | [3] |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | | | | | | | | |
| **ELECTIVES (8 Credits)** | | | | | | | | |
| \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ |  | \_\_\_\_\_\_\_\_\_\_ |
| \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ |  | \_\_\_\_\_\_\_\_\_\_ |
| \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ |  | \_\_\_\_\_\_\_\_\_\_ |
| \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ |  | \_\_\_\_\_\_\_\_\_\_ |
| \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | \_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_ |  | \_\_\_\_\_\_\_\_\_\_ |
|  | | | | | | | | |
| **SUMMARY** | | | | | | | | |
| **Academic Requirements** | | | | | **Graduation Requirements** | | | |
| **Comp.** | **Req.** |  | | |  | | | |
|  | 57 | Common Core Curriculum | | |  | OGET/OSAT/OPTE Tests Passed | | |
|  | 63 | Elementry Education Major | | |  | Field Hours Completed | | |
|  | 8 | Electives | | |  | Foreign Language Requirment | | |
|  | 128 | Total Credit Hours | | |  | Min 2.5 Grade Point Average | | |
|  |  | Last 30 credit hours from SGU | | |  | Core Curriculum Portfolio | | |
|  | | | | |  | Education Portfolio | | |
|  | | | | | | | | |
| Total number of transfer hours accepted toward degree | | | | | |  | | |
| Total number of transfer hours accepted toward electives | | | | | |  | | |
|  | | | | | | | | |
| OK to confer degree on: | |  | | | by: |  | | |

|  |
| --- |
| 1. Chart with the number of candidates and completers (Table 1): |

|  |  |  |
| --- | --- | --- |
| **Program: Secondary Mathematics** | | |
| **Academic Year** | **# of Candidates enrolled in the program** | **# of Program Completers** |
| 2009-10 | 0 | 0 |
| 2010-11 | 1 | 0 |
| 2011-12 | 1 | 0 |
| 2012-13 | 1 | 1 |

1. Chart on program faculty expertise and experience (Table 2):

TABLE 2

**Faculty Information**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Faculty Member Name** | **Highest**  **Degree, Field, & University** | **Assignment: Indicate the role of the faculty member** | **Faculty Rank** | **Tenure Track (Yes/**  **No)** | **Scholarship, Leadership in Professional Associations, and Service: List up to 3 major contributions in the past 3 years** | **Teaching or other professional experience in**  **P-12 schools** |
| **Charles John Buckley** | PhD in Mathematics Education, Columbia University | mentoring team, math content courses | Professor | yes | Dissertation: Method in Mathematics: Bernard Lonergan’s theory of knowledge and its implications for teaching and learning mathematics  **Leadership:** presentations at two national meetings of the National Junior College Mathematics Association and two at the state affiliate; secretary-treasurer of the affiliate for two years  **Service:** subject area expert for the Lesson Study inservice grant for high school mathematics teachers – two years |  |
| Gayle Fischer | PhD in Educational Psychology, University of Oklahoma | education coursework Foundations of Teaching, Middle Level Education, Student Teaching Seminar | Associate professor  Director of Teacher Education Dept | yes | Membership in Oklahoma Association of Colleges of Teacher Education, Association of Curriculum and Supervision, Association for Childhood Education International  Service at SGU: Academic Council, Assessment Committee, Academic Committee of SGU Board of Directors and Chair of Teacher Education Council | Teaching experience in elementary, middle level, HS (Alternative Ed) and special education for over thirty years  Certification: Elem1-8, Mild- Moderate Special Education B-12, Elem Principal K-8,  NBPTS –Special Education (Mild-Moderate) |
| Melody Harrington | M.Ed. – Counseling Psychology  University of Central Oklahoma  LPC – Licensed Professional Counselor | Department Chair – Social Science  Director of Counseling and Testing  Faculty – Social Sciences (1994- present) | Associate Professor | Yes | Chair – Institutional Review Board - SGU  Member of Oklahoma Association for the Improvement of Developmental Education  Member of Oklahoma Counseling Assoc.  Member of Texas Educational Diagnosticians Association | Member of Oklahoma Association for the Improvement of Developmental Education |
| Sr. Marcianne Kappes, STD, | Ph.D. degree in Historical Theology, Saint Louis University, St. Louis, Missouri, studies in Literature. | Catholic Perspectives in Education | Professor | yes | Association faculty moderator and Native American Study Group & Flute Circle (1997 to present).  Who's Who Among America's Teachers, 1996-2005  Member of TEC: Teacher Education Council (1998 to present).  Member of CMB: Campus Ministry Board (2001 to present).  ITEST moderator of local student chapter (1993 to present).  TAK: Theta Alpha Kappa moderator of local student chapter (1997 to present).  AISA or NASG: American Indian Student | Annual assistance with students in drama productions at Classen School of Advanced Studies |
| Valerie Plaus | M.S. in High Energy Physics, University of Wisconsin-Madison, Ph. D. Candidate (Nov. 20) | Calculus I | Assistant Professor | yes | Dissertation: Higgs Extensions of the Minimally Supersymmetric Standard Model |  |

**SECTION II— LIST OF ASSESSMENTS**

In this section, list the 6-8 assessments that are being submitted as evidence for meeting the OKLAHOMA standards. All programs must provide a minimum of six assessments. If your state does not require a state licensure test in the content area, you must substitute an assessment that documents candidate attainment of content knowledge in #1 below. For each assessment, indicate the type or form of the assessment and when it is administered in the program.

| **Name of Assessment** | | **Type or**  **Form of Assessment** | **When the Assessment Is Administered** |
| --- | --- | --- | --- |
|
| 1 | **[Licensure assessment, or other content-based assessment]**  Oklahoma Subject Area Test (OSAT) Advanced Mathematics | State Licensure Test | Typically at the conclusion of subject area courses or the beginning of student teaching |
| 2 | **[Assessment of content knowledge in mathematics]**  Grade Point Average in Mathematics Courses | Grade point average | End of Content Courses for individual courses, End of program to calculate GPA |
| 3 | **[Assessment of candidate ability to plan instruction]**  Planning Instruction | Lesson Plans | In Methods of Teaching Secondary/Middle Level Math |
| 4 | **[Assessment of student teaching]**  Monitor Report for Student Teaching | Rubric: Monitoring Report for Student Teaching | During student teaching |
| 5 | **[Assessment of candidate effect on student learning (required)]**  Student Learning Impact Project | Rubric: Student Learning Impact Project Evaluation | End of Student Teaching |

|  |  |  |  |
| --- | --- | --- | --- |
| 6 | **Additional assessment that addresses OKLAHOMA standards *(required)* ]**  Oklahoma General Education Test (OGET) | State Licensure Test | Required for admission to the program |

|  |  |  |  |
| --- | --- | --- | --- |
| 7 | **Additional assessment that addresses OKLAHOMA standards *(optional)*]**  Oklahoma Professional Teaching Examination (OPTE) | State Licensure Test | Usually at the Completion of Student Teaching |
| 8 | **Additional assessment that addresses OKLAHOMA standards *(optional)* ]**  Teacher Education Portfolio | Portfolio | At completion of program |

**SECTION III—RELATIONSHIP OF ASSESSMENT TO STANDARDS**

For each OKLAHOMA standard on the chart below, identify the assessment(s) in Section II that address each standard. One assessment may apply to multiple OKLAHOMA standards.

| **OKLAHOMA STANDARD** | **APPLICABLE ASSESSMENTS FROM SECTION II** |
| --- | --- |
| Mathematics Preparation for All Mathematics Teacher Candidates.  1. Knowledge of Problem Solving. Candidates know, understand and apply the process of mathematical problem solving.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 **X** #4  **X** #5 **X**#6 □#7 □#8 |
| 2. Knowledge of Reasoning and Proof. Candidates reason, construct, and evaluate mathematical arguments and develop appreciation for mathematical rigor and inquiry.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 **X** #4  **X** #5 □#6 □#7 □#8 |
| 3. Knowledge of Mathematical Communication. Candidates communicate their mathematical thinking orally and in writing to peers, faculty and others.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 □#2 **X** #3 **X** #4  **X** #5 □#6 □#7 **X** #8 |
| 4. Knowledge of Mathematical Connections. Candidates recognize, use, and make connections between and among mathematical ideas and in contexts outside mathematics to build mathematical understanding.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 □#2 **X** #3 **X** #4  **X** #5 □#6 □#7 **X**#8 |
| 5. Knowledge of Mathematical Representation. Candidates use varied representations of mathematical ideas to support and deepen students' mathematical understanding.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 □#2 **X** #3 □ #4  **X** #5 □ #6 □#7 **X**#8 |
| 6. Knowledge of Technology. Candidates embrace technology as an essential tool for teaching and learning mathematics.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 □#2 □#3 □ #4  **X** #5 □#6 □#7 **X**#8 |
| 7. Dispositions. Candidates support a positive disposition toward mathematical processes and mathematical learning.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | □#1 □#2 □ #3 **X** #4  **X** #5 □#6 □#7 **X**#8 |
| 8. Knowledge of Mathematics Pedagogy. Candidates possess a deep understanding of how students learn mathematics and of the pedagogical knowledge specific to mathematics teaching and learning.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | □#1 □#2 **X** #3 **X** #4  **X** #5 □#6 □#7 **X**#8 |
| 9. Knowledge of Number and Operations. Candidates demonstrate computational proficiency, including a conceptual understanding of numbers, ways of representing number, relationships among number and number systems, and meanings of operations.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 □#4  □#5 □#6 □#7 **X**#8 |
| 10. Knowledge of Different Perspectives on Algebra. Candidates emphasize relationships among quantities including functions, ways of representing mathematical relationships, and the analysis of change.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 **X** #4  □#5 □#6 □#7 **X**#8 |
| 11. Knowledge of Geometries. Candidates use spatial visualization and geometric modeling to explore and analyze geometric shapes, structures, and their properties.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □#3 **X** #4  □#5 □#6 □#7 **X**#8 |
| 12. Knowledge of Calculus. Candidates demonstrates a conceptual understanding of limit, continuity, differentiation, and integration and a thorough background in techniques and application of the calculus.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 **X** #4  □#5 □#6 □#7 **X**#8 |
| 13. Knowledge of Discrete Mathematics. Candidates apply the fundamental ideas of discrete mathematics in the formulation and solution of problems.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 □#4  □#5 □#6 □#7 **X**#8 |
| 14. Knowledge of Data Analysis, Statistics and Probability. Candidates demonstrate an understanding of concepts and practices related to data analysis, statistics, and probability.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 □#4  □#5 □ #6 □#7 **X**#8 |
| 15. Knowledge of Measurement. Candidates apply and use measurement concepts and tools.  [Indicators are listed at http://www.nctm.org/about/ncate/secondary\_indic.htm] | **X** #1 **X** #2 □ #3 □#4  □#5 □ #6 □#7 **X**#8 |
| **16.1** **Field-Based Experiences** Engage in a sequence of planned opportunities prior to student teaching that includes observing and participating secondary mathematics classrooms under the supervision of experienced and highly qualified teachers. | □#1 □ #2 □ #3 **X** #4  □#5 □ #6 □#7 □#8 |
| **16.2** **Field-Based Experiences** Experience full-time student teaching secondary-level mathematics that is supervised by an experienced and highly qualified teacher and a university or college supervisor with elementary mathematics teaching experience. | □ #1 □ #2 □ #3 □ #4  □#5 □ #6 □#7 **X**#8. |
| **16.3** **Field-Based Experiences** Demonstrate the ability to increase students’ knowledge of mathematics. | □#1 □#2 □#3 □#4  **X** #5 □#6 □#7 □#8 |

**SECTION IV—EVIDENCE FOR MEETING STANDARDS**

**#1 (Required)-CONTENT KNOWLEDGE: Data from licensure tests or professional examinations of content knowledge.** OKLAHOMA standards addressed in this assessment could include but are not limited to Standards 1-7 and 9-15. If your state does not require licensure tests or professional examinations in the content area, another assessment must be presented to document candidate attainment of content knowledge.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): **Oklahoma Subject Area Test (OSAT) in Advanced Mathematics, a state licensure test**
   2. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standards by number, title, and/or standard wording: **see Attachment B**
   3. A brief analysis of the data findings: **One completer in the years 2012-13**

**Subscores 281 285 272 277 274 189**

**Total: 264**

* 1. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **One completer in the years 2012-13 The data does not indicate any revision of the program is necessary.**

1. Assessment Documentation

e. The assessment tool itself or a rich description of the assessment (often the directions given to candidates): **See Attachment C, the OSAT Test Competencies for Advanced Mathematics**

f. The scoring guide for the assessment; and

**The test consists of 80 selected-response questions (85% of total points) and one constructed-response assignment (15%).**

**A passing score is 240 points of a total of 300.**

Scoring standards for the constructed response assignment are:

**Sample Performance Characteristics for Constructed-Response Assignments**

**PURPOSE** The extent to which the response achieves the purpose of the assignment

**SUBJECT MATTER KNOWLEDGE** Accuracy and appropriateness in the application of subject matter knowledge

**SUPPORT** Quality and relevance of supporting details

**RATIONALE** Soundness of argument and degree of understanding of the subject matter

**Sample Scoring Scale for Constructed-Response Assignments**

**The "4" response reflects a thorough knowledge and understanding of the subject matter.**

The purpose of the assignment is fully achieved.

There is a substantial, accurate, and appropriate application of subject matter knowledge.

The supporting evidence is sound; there are high-quality, relevant examples.

The response reflects an ably reasoned, comprehensive understanding of the topic.

**The "3" response reflects a general knowledge and understanding of the subject matter.**

The purpose of the assignment is largely achieved.

There is a generally accurate and appropriate application of subject matter knowledge.

The supporting evidence generally supports the discussion; there are some relevant examples.

The response reflects a general understanding of the topic.

**The "2" response reflects a partial knowledge and understanding of the subject matter.**

The purpose of the assignment is partially achieved.

There is a limited, possibly inaccurate or inappropriate application of subject matter knowledge.

The supporting evidence is limited; there are few relevant examples.

The response reflects a limited, poorly reasoned understanding of the topic.

**The "1" response reflects little or no knowledge and understanding of the subject matter.**

The purpose of the assignment is not achieved.

There is little or no appropriate or accurate application of subject matter knowledge.

The supporting evidence, if present, is weak; there are few or no relevant examples.

The response reflects little or no reasoning about or understanding of the topic.

**U The response is unscorable because it is illegible, not written to the assigned topic, written in a language other than English, or of insufficient length to score.**

**B There is no response to the assignment.**

g Charts that provide candidate data derived from the assessment:

**One completer in the years 2012-13.**

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**ATTACHMENT B: Alignment of the NCATE/OKLAHOMA program standards**

**with the OSAT Advanced Math, OGET, and OPTE Competencies**

|  |  |  |
| --- | --- | --- |
| **Standard 1: Knowledge of Mathematical Problem Solving** | **Indicators** | **OSAT Competencies (OGET and OPTE competencies are identified parenthetically)** |
| Candidates know, understand, and apply the process of mathematical problem solving. | 1.1 Apply and adapt a variety of appropriate strategies to solve problems. | **1, 2, 7, 8, 9, 10, 11, 12, 13, 14 16** |
| 1.2 Solve problems that arise in mathematics and those involving mathematics in other contexts. | **1, 2, 7, 8, 9, 10, 11, 12, 13, 14 16** |
|  | 1.3 Build new mathematical knowledge through problem solving. |  |
|  | 1.4 Monitor and reflect on the process of mathematical problem solving. | **1** |
| **Standard 2: Knowledge of Reasoning and Proof** |  |  |
| Candidates reason, construct, and evaluate mathematical arguments and develop an appreciation for mathematical rigor and inquiry. | 2.1 Recognize reasoning and proof as fundamental aspects of mathematics. | **2** |
| 2.2 Make and investigate mathematical conjectures. | **2, 5 (OGET 10)1** |
| 2.3 Develop and evaluate mathematical arguments and proofs. | **2, 11** |
| 2.4 Select and use various types of reasoning and methods of proof. | **2** |
| **Standard 3: Knowledge of Mathematical Communication** |  |  |
| Candidates communicate their mathematical thinking orally and in writing to peers, faculty, and others. | 3.1 Communicate their mathematical thinking coherently and clearly to peers, faculty, and others. |  |
| 3.2 Use the language of mathematics to express ideas precisely. | **3** |
| 3.3 Organize mathematical thinking through communication. | **3** |
| 3.4 Analyze and evaluate the mathematical thinking and strategies of others. | **3** |

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| **Standard 4: Knowledge of Mathematical Connections** |  |  |
| Candidates recognize, use, and make connections between and among mathematical ideas and in contexts outside mathematics to build mathematical understanding. | 4.1 Recognize and use connections among mathematical ideas. | **1, 5** |
| 4.2 Recognize and apply mathematics in contexts outside of mathematics. | **1, 7, 16** |
| 4.3 Demonstrate how mathematical ideas interconnect and build on one another to produce a coherent whole. | **1, 3, 4** |
| **Standard 5: Knowledge of Mathematical Representation** |  |  |
| Candidates use varied representations of mathematical ideas to support and deepen students’ mathematical understanding. | 5.1 Use representations to model and interpret physical, social, and mathematical phenomena. | **4, 5, 14 (OGET 13)1** |
| 5.2 Create and use representations to organize, record, and communicate mathematical ideas. | **3, 15** |
| 5.3 Select, apply, and translate among mathematical representations to solve problems. | **1, 5, 8, 9, 12** |
| **Standard 6: Knowledge of Technology** |  |  |
| Candidates embrace technology as an essential tool for teaching and learning mathematics. | 6.1 Use knowledge of mathematics to select and use appropriate technological tools, such as but not limited to, spreadsheets, dynamic graphing tools, computer algebra systems, dynamic statistical packages, graphing calculators, data-collection devices, and presentation software. | **1, 10** |
| **Standard 7: Dispositions** |  |  |
| Candidates support a positive disposition toward mathematical processes and mathematical learning. | * 1. Attention to equity | **(OPTE 1, 2, 5, 7)2** |
| * 1. Use of stimulating curricula | **(OPTE 4, 6)2** |
| * 1. Effective teaching | **(OPTE 5, 6, 7)2** |
| * 1. Commitment to learning with understanding | **(OPTE 6, 7)2** |
|  | * 1. Use of various assessments | **(OPTE 5, 8)2** |
|  | 7.6 Use of various teaching tools including technology | **(OPTE 5, 6, 7)2** |

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| **Standard 8: Knowledge of Mathematics Pedagogy** |  |  |
| Candidates possess a deep understanding of how students learn mathematics and of the  pedagogical knowledge specific to mathematics teaching and learning. | 8.1 Selects, uses, and determines suitability of the wide variety of available mathematics curricula and teaching materials for all students including those with special needs such as the gifted, challenged and speakers of other languages. |  |
| 8.2 Selects and uses appropriate concrete materials for learning mathematics. |  |
|  | 8.3 Uses multiple strategies, including listening to and understanding the ways students think about mathematics, to assess students’ mathematical knowledge. |  |
|  | 8.4 Plans lessons, units and courses that address appropriate learning goals, including those that address local, state, and national mathematics standards and legislative mandates. |  |
|  | 8.5 Participates in professional mathematics organizations and uses their print and on-line resources. |  |
|  | 8.6 Demonstrates knowledge of research results in the teaching and learning of mathematics. |  |
|  | 8.7 Uses knowledge of different types of instructional strategies in planning mathematics lessons. |  |
|  | 8.8 Demonstrates the ability to lead classes in mathematical problem solving and in developing in-depth conceptual understanding, and to help students develop and test generalizations. |  |
|  | 8.9 Develop lessons that use technology’s potential for building understanding of mathematical concepts and developing important mathematical ideas. |  |

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| **Standard 9: Knowledge of Number and Operation** |  |  |
| Candidates demonstrate computational proficiency, including a conceptual understanding of numbers, ways of representing number, relationships among number and number systems, and meanings of operations***.*** | 9.1 Develop the mathematics that underlies the procedures used for operations involving integers, rational, real, and complex numbers. | **4** |
| 9.2 Use properties involving number and operations, mental computation, and computational estimation. | **4** |
| 9.3 Provide equivalent representations of fractions, decimals, and percents. | **4 (OGET 12) 1** |
| 9.4 Create, solve, and apply proportions. | **2 (OGET 12) 1** |
|  | 9.5 Apply the fundamental ideas of number theory. | **4** |
|  | 9.6 Make sense of large and small numbers and use scientific notation. | **4 (OGET 12) 1** |
|  | 9.7 Analyze and explain the distinctions among whole numbers, integers, rational numbers, and real numbers and whether or not the field axioms hold. | **4** |
|  | 9.8 Demonstrate knowledge of the historical development of number and number systems including contributions from diverse cultures. | **1** |

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| **Standard 10: Knowledge of Different Perspectives on Algebra** |  |  |
| Candidates emphasize relationships among quantities including functions representing mathematical relationships Candidates emphasize relationships among quantities including functions | 10.1 Explore, analyze, and represent patterns, relations, and functions.. | **5, 6, 7, 8, 9** |
| 10.2 Represent and analyze mathematical structures. | **4, 6** |
| 10.3 Investigate equality, equations, and proportional relationships. | **6** |
| 10.4 Use mathematical models to represent quantitative relationships. | **5, 7, 9** |
|  | 10.5 Analyze change in various contexts. | **1, 13** |
|  | 10.6 Demonstrate knowledge of the historical development of algebra including contributions from diverse cultures. | **1** |
| Standard 11: Knowledge of Geometries |  |  |
| Candidates use spatial visualization and geometric modeling to explore and analyze  geometric shapes, structures, and their properties. | 11.1Demonstrate knowledge of core concepts and principles of Euclidean geometry in two and three dimensions. | **10, 11** |
| 11.2 Exhibit knowledge of informal proof | **2, 11** |
| 11.3 Build and manipulate representations of two- and three-dimensional objects and perceive an object from different perspectives. | **10, 11, 12, 13** |
|  | 11.4 Specify locations and describe spatial relationships using coordinate geometry. | **12** |
|  | 11.5 Analyze properties and relationships of geometric shapes and structures. | **11, 12** |
|  | 11.6 Apply transformation and use congruence, similarity, and line or rotational symmetry. | **12** |
|  | 11.7 Demonstrate knowledge of the historical development of Euclidean and non-Euclidean geometries including contributions from diverse cultures. | **1** |

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| Standard 12: Knowledge of Calculus |  |  |
| Candidates demonstrate a conceptual understanding of limit, continuity, differentiation, and integration and a thorough background in the techniques and application of the calculus. | 12.1 Demonstrate a conceptual understanding of basic calculus concepts. | **13** |
| 12.2 Demonstrate knowledge of the historical development of calculus including contributions from diverse cultures. | **1** |
| Standard 13: Knowledge of Discrete Mathematics |  |  |
| Candidates apply the fundamental ideas of discrete mathematics in the formulation and solution of problems*.* | 13.1 Demonstrate a conceptual understanding of the fundamental ideas of discrete mathematics such as finite graphs, trees and combinatorics.. | **14, 16** |
| 13.2 Use technological tools to apply the fundamental concepts of discrete mathematics. |  |
|  | 13.3 Demonstrate knowledge of the historical development of discrete mathematics including contributions from diverse cultures. | **1** |

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| Standard 14: Knowledge of Data Analysis, Statistics, and Probability |  |  |
| Candidates demonstrate an understanding of concepts and practices related to data analysis, statistics, and probability. | 14.1 Design investigations, collect data through random sampling or random assignment to treatments, and use a variety of ways to display the data and interpret data representations. | **14, 15 (OGET 9\*)1** |
|  | 14.2 Draw conclusions involving uncertainty by using hands-on and computer-based simulation for estimating probabilities and gathering data to make inferences and decisions. | **15** |
|  | 14.3 Identify misuses of statistics and invalid conclusions from probability. | **15** |
|  | 14.4 Use appropriate statistical methods and technological tools to analyze data and describe shape, spread, and center. | **15** |
|  | 14.5 Investigate, interpret, and construct representations for conditional probability, geometric probability, and for bivariate data. | **15** |
|  | 14.6 Demonstrate knowledge of the historical development of statistics and probability including contributions from diverse cultures. | **1, 15** |

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| Standard 15: Knowledge of Measurement |  |  |
| Candidates apply and use measurement concepts and tools*.* | 15.1 Recognize measurement attributes and their effect on the choice of appropriate toolsand units. | **10 (OGET 12\*)1** |
|  | 15.2 Apply techniques, tools, and formulas to determine measurements. | **10 (OGET 14) 1** |
|  | 15.3 Employ estimation as a way of understanding measurement units and processes. |  |
|  | 15.4 Completes error analysis through determining the reliability of the numbers obtained from measurement. |  |
|  | 15.5 Demonstrate knowledge of the historical development of measurement and measurement systems including contributions from diverse cultures. | **1** |
| Standard 16: Field-Based Experiences |  |  |
| Candidates complete field-based experiences in mathematics classrooms. | 16.1 Engage in a sequence of planned opportunities prior to student teaching that includes observing and participating in both middle and secondary mathematics classrooms under the supervision of experienced and highly qualified teachers. |  |
|  | 16.2 Experience full-time student teaching in secondary mathematics that is supervised by a highly qualified teacher and a university or college supervisor with secondary mathematics teaching experience. |  |
|  | 16.3 Demonstrate the ability to increase students’ knowledge of mathematics. |  |

**ATTACHMENT C: OSAT TEST COMPETENCIES: ADVANCED MATHEMATICS**

**SUBAREAS:**

I. Mathematical Processes and Number Sense

II. Relations, Functions, and Algebra

III. Measurement and Geometry

IV. Trigonometry and Calculus

V. Probability, Statistics, and Discrete Mathematics

**SUBAREA I—MATHEMATICAL PROCESSES AND NUMBER SENSE**

**Competency 0001**

**Understand mathematical problem solving and the connections between and among the fields of**

**mathematics and other disciplines.**

The following topics are examples of content that may be covered under this competency.

Analyze and apply a variety of problem-solving strategies to various contexts.

Select and use appropriate manipulatives and technological tools (e.g., spreadsheets, graphing utilities, statistical packages) to solve problems.

Recognize and apply connections between and among mathematical concepts and other disciplines.

Demonstrate knowledge of the historical development of mathematics, including contributions from diverse

cultures.

**Competency 0002**

**Understand the principles and processes of mathematical reasoning.**

The following topics are examples of content that may be covered under this competency.

Construct and evaluate mathematical conjectures, arguments, and proofs.

Apply inductive and deductive reasoning to solve problems.

Use counterexamples to formulate and evaluate arguments and disprove suppositions.

Analyze and apply the principle of mathematical induction in proving or disproving arguments.

**Competency 0003**

**Understand and communicate mathematical concepts and symbols.**

The following topics are examples of content that may be covered under this competency.

Convert everyday language into mathematical language, notation, and symbols, and vice versa.

Analyze, use, and perform conversions among algebraic, graphic, pictorial, and other modes of

presenting and modeling mathematical concepts and relationships.

Deduce the assumptions inherent in a given mathematical statement, expression, or definition.

Evaluate the mathematical thinking and strategies of others.

**Competency 0004**

**Understand number theory and the principles and properties of the real and complex number**

**systems.**

The following topics are examples of content that may be covered under this competency.

Apply the properties of integers, fractions, decimals, and percents and their operations in problem-solving

situations.

Understand the fundamental principles of number theory (e.g., prime numbers, divisibility).

Analyze and apply algebraic and geometric representations of complex numbers (e.g., polar form,

vector form).

Perform and interpret operations on complex numbers (e.g., difference, product, root; geometric

interpretation of the sum).

**SUBAREA II—RELATIONS, FUNCTIONS, AND ALGEBRA**

**Competency 0005**

**Understand the principles and properties of algebraic relations and functions.**

The following topics are examples of content that may be covered under this competency.

Distinguish between relations and functions.

Analyze relationships among different representations (e.g., tabular, algebraic, graphic) of relations

and functions.

Analyze relations and functions and their graphs in terms of domain, range, intercepts, maxima, and minima.

Determine the effects of transformations [e.g., f(x + k), k f(x)] on the graph of a relation or function.

**Competency 0006**

**Understand the principles and properties of linear algebra.**

The following topics are examples of content that may be covered under this competency.

Analyze and apply properties involving matrices (e.g., commutative property of addition,

associative property of multiplication).

Determine and analyze the inverse and determinant of a matrix.

Represent and solve systems of linear equations using matrices.

Determine and analyze the matrix of a linear transformation.

**Competency 0007**

**Understand the properties of linear functions and relations.**

The following topics are examples of content that may be covered under this competency.

Determine and interpret the slope and intercept(s) of a linear equation in mathematical and real-world

contexts.

Determine the equation of a line on the basis of different types of information (e.g., two points on the line,

the slope and one point on the line).

Model and solve problems involving linear equations and inequalities using algebraic and graphic techniques.

Solve systems of linear equations and inequalities using a variety of techniques (e.g., substitution, graphing).

**Competency 0008**

**Understand the properties of quadratic and higher-order polynomial relations and functions.**

The following topics are examples of content that may be covered under this competency.

Analyze relationships among tabular, algebraic, and graphic representations of quadratic and higher-order

polynomial functions.

Model and solve problems involving quadratic and higher-order polynomial equations and inequalities using

a variety of techniques (e.g., completing the square, factoring, graphing).

Analyze the zeros of quadratic and higher-order polynomial functions and apply their characteristics to solve

problems.

Analyze and use the equations and graphs of conic sections.

**Competency 0009**

**Understand the principles and properties of rational, radical, piecewise, and absolute value**

**functions.**

The following topics are examples of content that may be covered under this competency.

Manipulate and simplify expressions involving rational, radical, piecewise, and absolute value functions.

Describe and analyze characteristics of rational, radical, piecewise, and absolute value functions and their

graphs (e.g., intercepts, asymptotes, domain, range).

Convert between algebraic and graphic representations of rational, radical, piecewise, and absolute value

functions.

Model and solve problems involving rational, radical, piecewise, and absolute value equations.

**Competency 0010**

**Understand the principles and properties of exponential and logarithmic functions.**

The following topics are examples of content that may be covered under this competency.

Apply the laws of exponents and logarithms to manipulate and simplify expressions.

Analyze and apply the inverse relationship between exponential and logarithmic functions.

Convert algebraic representations of exponential and logarithmic functions into graphic representations,

and vice versa.

Model and solve problems involving exponential and logarithmic functions (e.g., compound interest,

exponential decay) in mathematical and real-world contexts.

**SUBAREA III—MEASUREMENT AND GEOMETRY**

**Competency 0011**

**Understand principles and procedures related to measurement.**

The following topics are examples of content that may be covered under this competency.

Apply formulas to find measures (e.g., angles, length, perimeter, area, volume) for a variety of twoand

three-dimensional figures.

Solve problems involving derived units (e.g., density, pressure, rates of change).

Compare and convert measurements within and between customary and metric measurement systems.

Find angle and arc measures related to circles.

**Competency 0012**

**Understand the principles and properties of Euclidean geometry in two and three dimensions.**

The following topics are examples of content that may be covered under this competency.

Use the properties of lines (e.g., parallel, perpendicular) and angles (e.g., supplementary, vertical) to

characterize geometric relationships and solve problems.

Apply the principles of similarity and congruence to solve problems involving two- and three-dimensional

figures.

Apply the properties of circles (e.g., intersecting chords and secants) and polygons (e.g., numbers and lengths

of sides, measures of angles) to analyze and solve problems.

Use definitions, postulates, and theorems of geometry (e.g., Pythagorean theorem) to construct and analyze

proofs.

**Competency 0013**

**Understand the principles and properties of coordinate geometry.**

The following topics are examples of content that may be covered under this competency.

Apply geometric concepts (e.g., distance, midpoint, slope) to model and solve problems.

Apply the geometric concepts of parallel and perpendicular lines to model and solve problems.

Use two- and three-dimensional coordinate systems to represent and analyze geometric figures.

Represent two- and three-dimensional geometric figures in various coordinate systems (e.g., Cartesian, polar).

**Competency 0014**

**Understand the principles and properties of vector and transformational geometries.**

The following topics are examples of content that may be covered under this competency.

Describe the position and movement of objects using vectors.

Model and solve problems involving vector addition and scalar multiplication (e.g., displacement, force).

Analyze and apply geometric transformations (e.g., translations, reflections, dilations, rotations).

Construct and analyze figures using geometric transformations in the coordinate plane (e.g., reflecting across

an axis).

**SUBAREA IV—TRIGONOMETRY AND CALCULUS**

**Competency 0015**

**Understand the principles and properties of and relationships involving trigonometric functions and**

**their graphic representations.**

The following topics are examples of content that may be covered under this competency.

Analyze the relationships among right triangle ratios, trigonometric functions, and the unit circle.

Analyze graphs of trigonometric functions in terms of frequency, period, amplitude, and phase shift.

Determine the effects of transformations on the graph of a trigonometric function

[e.g., f(x) = a sin(bx + c) + d].

Simplify expressions using trigonometric identities.

Verify trigonometric identities.

**Competency 0016**

**Understand and apply the principles and techniques of trigonometry to model and solve problems.**

The following topics are examples of content that may be covered under this competency.

Solve real-world problems using the trigonometry of right triangles.

Apply trigonometric functions and relationships (e.g., law of sines) to model and solve problems involving

angles, length, and area.

Model and solve problems involving trigonometric equations and inequalities using algebraic and graphic

techniques.

Use trigonometric functions to model periodic phenomena in mathematics and other disciplines.

**Competency 0017**

**Understand the principles and properties of limits, continuity, and average rates of change.**

The following topics are examples of content that may be covered under this competency.

Apply the concept of limits to algebraic functions and their graphs.

Analyze and interpret characteristics of functions (e.g., continuity, asymptotes) using the concept of limit.

Recognize and apply the relationship between the slope of a secant line and the derivative of a function.

Solve problems involving average rates of change (e.g., average velocity and acceleration).

**Competency 0018**

**Understand and apply the principles and techniques of differential calculus.**

The following topics are examples of content that may be covered under this competency.

Relate the concept of the derivative to instantaneous rate of change and the concept of the slope of the line

tangent to a curve.

Find the derivative of a function.

Use the concepts of differential calculus to analyze the graph of a function (e.g., maxima, concavity, points of

inflection).

Model and solve real-world problems (e.g., rates of change, optimization, related rates) using differential

calculus.

**Competency 0019**

**Understand and apply the principles and techniques of integral calculus.**

The following topics are examples of content that may be covered under this competency.

Relate the concept of the integral to the area under a curve.

Find the definite and indefinite integral of a function.

Use integration in problem-solving situations (e.g., area, velocity, volume).

Model and solve problems involving first-order differential equations (e.g., separation of variables, initial value

problems).

**SUBAREA V—PROBABILITY, STATISTICS, AND DISCRETE MATHEMATICS**

**Competency 0020**

**Understand the principles, properties, and techniques of probability.**

The following topics are examples of content that may be covered under this competency.

Evaluate descriptions and calculate the probabilities of different kinds of events (e.g., conditional, independent,

mutually exclusive).

Solve problems using the techniques of probability (e.g., addition and multiplication rules).

Use and interpret graphic representations of probabilities (e.g., tables, Venn diagrams, tree diagrams,

frequency graphs, the normal curve).

Analyze and apply the properties of probability distributions (e.g., binomial, normal) to model and solve

problems.

**Competency 0021**

**Understand the principles, properties, and techniques of statistics.**

The following topics are examples of content that may be covered under this competency.

Determine random sampling techniques to collect representative data.

Display and use data in a variety of graphic formats (e.g., charts, bar graphs, circle graphs, stem-and-leaf plots,

histograms, scatter plots).

Determine, analyze, and interpret measures of central tendency (e.g., mean, median) and dispersion

(e.g., standard deviation).

Analyze and interpret statistical measures (e.g., correlation coefficients, confidence intervals, linear regression

equations) and make valid inferences and predictions based on the measures.

**Competency 0022**

**Understand the principles of discrete mathematics.**

The following topics are examples of content that may be covered under this competency.

Apply various counting strategies (e.g., permutations, combinations) to problem-solving situations.

Analyze recurrence relations (e.g., Fibonacci sequence, triangular numbers) and use them to model and

solve problems.

Analyze sequences and series (e.g., arithmetic, geometric) and use them to model and solve problems.

Apply the basic elements of discrete mathematics (e.g., graph theory, linear programming, finite difference

methods) to model real-world problems.

**#2 (Required)-CONTENT KNOWLEDGE: Assessment of content knowledge in the language to be taught.** OKLAHOMA standards addressed in this assessment could include but are not limited to Standards1-7 and 9-15. Examples of assessments include comprehensive examinations; written interpersonal/presentational tasks; capstone projects or research reports addressing cross-disciplinary content; philosophy of teaching statement that addresses the role of culture, literature, and cross-disciplinary content; and other portfolio tasks.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): **Grade Point Average in Mathematics Courses required in the program.**
   2. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standards by number, title, and/or standard wording: **see Attachment D: The alignment of OKLAHOMA Standards with each Mathematics course in the program.**
   3. A brief analysis of the data findings: **There was one completer in 2012-13. His grades in the relevant courses are included in the table. These grades indicate he achieved the required competencies..**
   4. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **It is difficult to generalize from one case, but since the course was developed to achieve the standards, and the course requirements have been met, there is no reason to question that the standards have been met..**
2. Assessment Documentation

e. The assessment tool itself or a rich description of the assessment (often the directions given to candidates): **The table for recording the scores of each candidate is provided as Attachment E.**

f. The scoring guide for the assessment: **Teacher candidates must earn at least a C or better in all required Mathematics and Education courses and 2.5 overall GPA.**

g Charts that provide candidate data derived from the assessment: **The grades for the completer in 2012-13 are shown in the chart.**

ATTACHMENT D: Mathematics Courses required of Teacher Candidates in Math Education (Secondary) and the standards addressed

MA 2054 Calculus I

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 1 Problem Solving | 1.1 Apply and adapt a variety of appropriate strategies to solve problems; 1.2 Solve problems that arise in mathematics and those involving mathematics in other contexts: throughout the course, especially in class discussions and laboratories | Class participation, homework, laboratories, and projects |
| 2 Knowledge of Reasoning and Proof | 2.2 Make and investigate mathematical conjectures, 2.3 Develop and evaluate mathematical arguments and proofs: class discussions | Class participation |
| 3 Communi­cation | 3.1 Communicate their mathematical thinking coherently and clearly to peers, faculty, and others; 3.2 Use the language of mathematics to express ideas precisely: class discussions, lectures, and laboratories | Laboratories, presentation of project |
| 4 Knowledge of Mathematical Connections | 4.1 Recognize and use connections among mathematical ideas, 4.2 Recognize and apply mathematics in contexts outside of mathematics: lectures and laboratories | Homework, laboratories, projects |
| 5 Represen­tation | Use algebra and geometry to model and solve problems: throughout the course, especially in applications | Homework, laboratories, projects |
| 6 Technology | 6.1 Use knowledge of mathematics to use appropriate technological tools, such as dynamic graphing tools, computer algebra systems, graphing calculators, and presentation software: lectures, demonstrations, and laboratories | Homework, laboratories, projects, examinations |
| 10 Algebra | 10.1 Explore, analyze, and represent patterns, relations, and functions; 10.2 Represent and analyze mathematical structures; 10.3 Investigate equality, equations, and proportional relationships, 10.4 Use mathematical models to represent quantitative relationships, 10.5 Analyze change in various contexts: throughout | Homework, class discussion, laboratories, examinations |
| 11 Geometry | 11.4 Specify locations and describe spatial relationships using coordinate geometry; 11.5 Analyze properties and relationships of geometric shapes and structures, 11.6 Apply transformation and use congruence, similarity, and line or rotational symmetry: throughout | Homework, class discussion, laboratories, examinations |
| 12 Calculus | 12.1 Demonstrate a conceptual understanding of basic calculus concepts: throughout, in lectures and laboratories | Homework, class discussion, laboratories, examinations |

MA 2153 Calculus II

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 1 Problem Solving | Use a problem-solving approach tos et up, estimate solutions to, and solve problems from everyday life, including problems relating to business, science and geometrical shapes: throughout the course, especially in class discussions and laboratories | Class participation, laboratories, and projects |
| 3 Communi­cation | Communicate mathematical thinking orally and in written form: laboratories and projects | Laboratories, presentation of project |
| 4 Connections | Show an understanding of the in interrelationships within mathematics: polar coordinates | Homework, examination |
| 5 Represen­tation | Use algebra and geometry to model and solve problems: throughout the course, especially in applications | Homework, laboratories, projects |
| 6 Technology | Use calculators in computational and problem-solving situations: throughout | Homework, laboratories, and examinations |
| 6 Technology | Use computer graphics software to explore patterns through graphs: homework and laboratories | Homework, laboratories, projects, examinations |
| 12 Calculus | Understand and apply the concepts of differentiation and integration and apply the techniques in solving problems: throughout, in lectures and laboratories | Homework, class discussion, laboratories, examinations |

MA 3013 Elementary Statistics

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 1 Problem Solving | 1.1 Apply and adapt a variety of appropriate strategies to solve problems, 1.2 Solve problems that arise in mathematics and those involving mathematics in other contexts: throughout the course, especially in class discussions and laboratories | Class discussion, laboratories, homework, examinations |
| 4. Connections | 4.1 Recognize and use connections among mathematical ideas, 4.2 Recognize and apply mathematics in contexts outside of mathematics: lectures, class discussions | Class discussion, homework, examinations |
| 5. Represen­tations | 5.3 Select, apply, and translate among mathematical representations to solve problems: lectures, demonstrations | Homework, laboratories, examinations |
| 6. Technology | 6.1 Use knowledge of mathematics to select and use appropriate technological tools, such as but not limited to, spreadsheets, dynamic graphing tools, computer algebra systems, dynamic statistical packages, graphing calculators, data-collection devices, and presentation software: throughout | Homework, laboratories, examinations |
| 13. Discrete Mathematics | 13.1 Demonstrate a conceptual understanding of the fundamental ideas of discrete mathematics such as finite graphs, trees and combinatorics: lectures | Homework, laboratories, examinations |
| 14. Data Analysis, Statistics, and Probability | 14.1 Design investigations, collect data through random sampling or random assignment to treatments, and use a variety of ways to display the data and interpret data representations, 14.2 Draw conclusions involving uncertainty by using hands-on and computer-based simulation for estimating probabilities and gathering data to make inferences and decisions, 14.3 Identify misuses of statistics and invalid conclusions from probability, 14.4 Use appropriate statistical methods and technological tools to analyze data and describe shape, spread, and center, 14.5 Investigate, interpret, and construct representations for conditional probability, geometric probability, and for bivariate data, 14.6 Demonstrate knowledge of the historical development of statistics and probability including contributions from diverse cultures: throughout | Class discussion, laboratories, homework, examinations |

MA 3113 Discrete Mathematics

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 13 Discrete Mathematics | 13.1 Demonstrate a conceptual understanding of the fundamental ideas of discrete mathematics such as finite graphs, trees and combinatorics, 13.2 Use technological tools to apply the fundamental concepts of discrete mathematics: throughout | Homework, class discussions, examinations |

MA 3123 Linear Algebra

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed d** | **How it is assessed** |
| 2 Knowledge of Reasoning and Proof | 2.1 Recognize reasoning and proof as fundamental aspects of mathematics, 2.2 Make and investigate mathematical conjectures, 2.3 Develop and evaluate mathematical arguments and proofs, 2.4 Select and use various types of reasoning and methods of proof: lectures | Homework, examinations |
| 3 Communi­cation | 3.2 Use the language of mathematics to express ideas precisely | Class discussions, examinations |
| 4 Connections | 4.1 Recognize and use connections among mathematical ideas, 4.3 Demonstrate how mathematical ideas interconnect and build on one another to produce a coherent whole: lectures, homework | Class discussions, homework, examinations |
| 9 Number and Operations | Recognize matrices and vectors as systems that have some of the properties of the real number system | Class discussion, assignments, examinations |
| 11 Geometry | 11.6 Apply transformation and use congruence, similarity, and line or rotational symmetry: throughout | Homework, class discussions, examinations |

MA 3253 Calculus III

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 1 Problem Solving | Use a problem-solving approach tos et up, estimate solutions to, and solve problems from everyday life, including problems relating to business, science and geometrical shapes: throughout the course, especially in class discussions and laboratories | Class participation, laboratories, and projects |
| 3 Communi­cation | Communicate mathematical thinking orally and in written form: laboratories and projects | Laboratories, presentation of project |
| 4 Connections | Demonstrate how mathematical ideas interconnect and build on one another to produce a coherent whole: vector modeling and calculus | Homework, laboratories, examinations |
| 5 Represen­tation | Use algebra and geometry to model and solve problems: throughout the course, especially in applications | Homework, laboratories, projects |
| 6 Technology | Use calculators in computational and problem-solving situations: throughout | Homework, laboratories, and examinations |
| 6 Technology | Use computer graphics software to explore patterns through graphs: homework and laboratories | Homework, laboratories, projects, examinations |
| 10 Algebra | Analyze patterns, relations, and functions of several variables and use mathematical models to represent and understand quantitative relationships: throughout | Homework, class discussion, laboratories, examinations |
| 11 Geometry | Utilize vectors to specify locations and describe spatial relations: throughout | Homework |
| 12 Calculus | Understand and apply the concepts of differentiation and integration and apply the techniques in solving problems: throughout, in lectures and laboratories | Homework, class discussion, laboratories, examinations |

MA 3303 Introduction to Number Theory

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed d** | **How it is assessed** |
| 2 Knowledge of Reasoning and Proof | 2.1 Recognize reasoning and proof as fundamental aspects of mathematics, 2.2 Make and investigate mathematical conjectures, 2.3 Develop and evaluate mathematical arguments and proofs, 2.4 Select and use various types of reasoning and methods of proof: lectures | Homework, examinations, class discussion |
| 9. Number and operations | 9.1 Develop the mathematics that underlies the procedures used for operations involving integers, rational, real, and complex numbers, 9.5 Apply the fundamental ideas of number theory | Homework, examinations, class discussion |

MA 3413 History & Philosophy of Math

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 9,10,11,12,13,14,15 | Demonstrate knowledge of the historical development of the areas of mathematics, including contributions from diverse cultures: throughout the course | Class discussion, assignments, examinations, research paper |

MA 3263 Methods of Teaching Secondary/Middle Level Math

Teacher candidates in Middle Level and Secondary Math Education will learn to use a variety of researched based, effective teaching techniques to foster active inquiry, collaboration, supportive interaction and curriculum integration. The course will introduce curriculum development and modification, methods of creating learning environments to support a variety of learning styles and assessments, reading instruction at the secondary level, and classroom management techniques appropriate for grades 6-12. Teacher candidates will practice lesson planning. A field experience in the schools is a component of the course.

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |

|  |  |  |
| --- | --- | --- |
| 1. Problem Solving | 1.1 Apply and adapt a variety of appropriate strategies to solve problems., 1.4 Monitor and reflect on the process of mathematical problem solving: class discussion | Class discussion |
| 2. Reasoning and Proof | 2.1 Recognize reasoning and proof as fundamental aspects of mathematics’ 2.2 Make and investigate mathematical conjectures, 2.3 Develop and evaluate mathematical arguments and proofs, 2.4 Select and use various types of reasoning and methods of proof: lectures, class discussions | Class discussions, homework, examinations |
| 3 Communica-tion | 3.1 Communicate their mathematical thinking coherently and clearly to peers, faculty, and others, 3.2 Use the language of mathematics to express ideas precisely, 3.3 Organize mathematical thinking through communication, 3.4 Analyze and evaluate the mathematical thinking and strategies of others: lectures, class discussions | Class discussions, homework, examinations, presentations |
| 5. Represen­tation | 5.1 Use representations to model and interpret physical, social, and mathematical phenomena, 5.2 Create and use representations to organize, record, and communicate mathematical ideas, 5.3 Select, apply, and translate among mathematical representations to solve problems: lectures, class discussions | Class discussions, homework, examinations, presentations |
| 6 Technology | 6.1 Use knowledge of mathematics to select and use appropriate technological tools, such as dynamic graphing tools, graphing calculators, and presentation software: class discussions | Class discussions, presentations |
| 8 Pedagogy | Analyzes various curricular designs for the teaching of algebra | Class discussion |
|  | Uses multiple strategies to assess students’ mathematical knowledge | Sample lessons |
|  | Uses multiple instructional strategies in designing mathematics lessons | Lesson plans |
|  | Uses strategies for developing problem-solving and enabling students to make and test generalizations | Lesson plans |
| 8 Pedagogy | 8.2 Selects and uses appropriate concrete materials for learning mathematics, 8.4 Plans lessons, units and courses that address appropriate learning goals, including those that address local, state, and national mathematics standards and legislative mandates, 8.6 Demonstrates knowledge of research results in the teaching and learning of mathematics, 8.9 Develop lessons that use technology’s potential for building understanding of mathematical concepts and developing important mathematical ideas: class discussion | Lesson plans, presentations |
|  | Uses multiple strategies to assess students’ mathematical knowledge | Sample lessons |
|  | Uses multiple instructional strategies in designing mathematics lessons | Lesson plans |
|  | Uses strategies for developing problem-solving and enabling students to make and test generalizations | Lesson plans |

MA 4313 Abstract Algebra

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 10 Algebra | Apply the concepts of abstract algebra to form the basis for real number operations and to formally analyze algebraic structures: throughout | Class discussion, assignments, examinations |

MA 4513 College Geometry

|  |  |  |
| --- | --- | --- |
| **Standard** | **Objective and where it is addressed** | **How it is assessed** |
| 11 Geometry | Demonstrate knowledge of core concepts of non-Euclidean and neutral geometries from formal and informal perspectives: throughout | Class discussions and presentations, examinations |
|  | Show the role of axiomatic systems in geometry and formulate proofs | Class discussion, homework, presentations, examinations |
|  | Apply transformations and analyze symmetry, similarity, and congruence through these transformations | Class discussion, homework |
|  | Develop drawings to explore geometric ideas | Class presentation |
|  | Demonstrate knowledge of the historical development of geometries | Class discussion |
| 3 Communi-cation | Express mathematical concepts correctly in both oral and written communication | Class discussion, homework, examinations |

**ATTACHMENT E- CONTENT KNOWLEDGE IN MATHEMATICS COURSES**

1. **Description of the Assessment and its Use in the Program**

All candidates in the program preparing Secondary Math teachers must complete required coursework aligned with OKLAHOMA standards. The coursework described in this assessment are designed to give candidates content knowledge in Mathematics, at least to the level of a major in mathematics.

While grades are only one measure of candidates’ content knowledge, the coursework in Assessment #2 was selected or developed to support OKLAHOMA standards, prepare candidates to be successful in passing the state testing in mathematics and to teach in all the possible courses they would be eligible to teach.

1. **Brief Analysis of the Data Findings**

Table 1 shows how we will use the data, when there are candidates and completers of the program. Table 1 will be used to record candidates’ grades in required coursework that address Mathematics content. Average course grades, with range and percent of candidates meeting minimum expectation are included. Grade levels are determined by class averages as follows: 90-100%=A, 80-89%=B, 70-79%= C, 60-69%=D and below 60%=F. All candidates must earn the minimum requirement of C (2.0) or better in all required coursework.

**Table 1: Secondary Mathematics Education Candidates’ Grades in Required Coursework (Content Knowledge)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Course** | Year 1 (2010-11)  N= 1 | | Year 2 (2011-12)  N= 1 | | Year 3 (2012-13)  N= | |
|  | Average course grade  (range)\* | % of candidates meeting minimum expectation | Average course grade  (range)\* | % of candidates meeting minimum expectation | Average course grade  (range)\* | % of candidates meeting minimum expectation |
| MA 2054 Calculus I | C/B | 100 |  |  |  |  |
| MA 2153 Calculus II | B/? | 100 |  |  |  |  |
| MA 3013 Elementary Statistics | B/C | 100 |  |  |  |  |
| MA 3033 Introduction to Number Theory |  |  | C/B | 100 |  |  |
| MA 3113 Discrete Mathematics | ^ |  |  |  |  |  |
| MA 3123 Linear Algebra |  |  | C/C | 100 |  |  |
| MA 3253 Calculus III |  |  | A/B+ | 100 |  |  |
| MA 3413 History & Philosophy of Math |  |  | B/B+ | 100 |  |  |
| MA 3263 Methods of Teaching Secondary/Middle Level Math |  |  |  |  | B/B | 100 |
| MA 4313 Abstract Algebra |  |  |  |  | B/B | 100 |
| MA 4513 College Geometry |  |  | A/A | 100 |  |  |

\*A=4, B=3, C=2, D=1, F=0

^ at San Jose State University, Fall 2008

**#3 (Required)-PEDAGOGICAL AND PROFESSIONAL KNOWLEDGE, SKILLS, AND DISPOSITIONS: Assessment that demonstrates candidates can effectively plan classroom-based instruction.** OKLAHOMA standards that could be addressed in this assessment include but are not limited to Standards 8. Examples of assessments include the evaluation of candidates’ abilities to develop lesson or unit plans, individualized educational plans, needs assessments, or intervention plans.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): **Planning Instruction.**
2. **Description of the Assessment and its Use in the Program**

Assessment #3 demonstrates that candidates can effectively plan instruction based on OKLAHOMA standards and state curriculum. This assessment is a compilation of the evaluations of lesson, unit and chapter plans submitted and presented by the teacher candidate

Scores from these lesson plan assessments will be analyzed and compared with the lesson planning component of the Student Teacher Monitoring Report. This will provide the unit evidence of the effectiveness of coursework in preparing teacher candidates to plan lessons appropriate for Secondary mathematics students. Because there have been no completers in the last three years, no data are reported for this program review.

**Alignment of the Assessment with OKLAHOMA standards**

Candidates in the program preparing them to teach mathematics at the Secondary Level are asked to prepare lesson plans in a number of their required courses, expanding to unit and chapter plans as they progress through their courses and into student teaching. They prepare lesson plans and present lessons in Methods of Teaching Secondary/Middle Level Math

(MA 3263)). In this course, they develop larger unit or chapter plans. They are in field experiences connected with other education classes at the same time as many of these courses, so they would have the opportunity to practice activities from their unit with secondary students. Development of these plans culminates in Student Teaching, when students assume full-time responsibility for classes in their schools.

During Methods of Teaching Secondary/Middle Level Math (MA 3263), candidates practice developing several lesson plans which address various forms of mathematics, at the appropriate level. Candidates are required to incorporate the following activities/assessments within in their unit of instruction:

* Activities and assessments which require critical thinking or problem solving
* Activities and assessments that integrate technology
* Activities and assessment which engage all learners
* Unit objectives must address state PASS standards
* Candidates’ reflection of the effectiveness of the unit and how they might change it based on research/theories of best practice

Candidates develop several standard-specific lesson plans during MA 3263 Methods of Teaching Secondary/Middle Level Math, which address the standards as they apply within the particular content area. For reporting data, teacher candidates develop a thematic unit of instruction appropriate for Secondary Mathematics. A field experience of 15 clock hours is attached to this course so that candidates have an opportunity to practice activities from their unit with secondary students. The following chart describes this unit plan and its alignment to OKLAHOMA standards.

|  |  |
| --- | --- |
| **Essentials of Unit of Instruction** | **OKLAHOMA Standards** |
| **Rationale for the Unit:** What are your reasons for teaching this unit? Is the topic relevant to current practice, your student audience and your beliefs about teaching mathematics? | 7.2, 7.3, 8.4 |
| **Unit objectives:** What are your overall goals, unit objectives (as they relate to PASS standards) and guiding questions? Include grade level, classroom culture and setting. | 8.4 |
| **Lesson Plans:** Include detailed daily lesson plans, materials needed, technology, and time allotted for each lesson | 6.1, 7.1, 7.2, 8.1, 8.2, 8.4, |
| **Assessment:** Include assessment plan, pre/post assessment, ongoing formal and informal assessments throughout unit and final assessment. Why did you choose the assessments that you did? | 8.3, |
| **Teaching/Learning Strategies:** Explain how you engage all students in learning, use of varied activities (differentiated, culturally responsive, collaborative, authentic, etc) | 8.1, 8.2, 8.7 |
| **Reflection:** What was your overall opinion of the unit? What would you change based on research/theories of best practice and student performance? | 8.6 |

The Lesson Plan Rubric (Attachment A) will be used for scoring the lesson plan units in MA 3263 Methods of Teaching Secondary/Middle Level Math. The maximum score a candidate can receive on this assessment is 51. However, some components of the rubric may not be applicable to a particular unit plan. If this is the case, a non score (indicated as N/A) will not count against the student’s overall score. Candidates must receive 70% or better on the assessment to “meet expectations”. Candidates’ scores on this assessment provide one piece of evidence of their ability to plan curriculum appropriate for teaching Secondary Mathematics students.

Table 1 shows alignment of planning to OKLAHOMA standards, as assessed on the Student Teacher Monitoring Report. Data from this assessment will continue to be used as evidence of candidates’ ability to develop and plan lessons mathematics. Data from this assessment is especially relevant because it allows university faculty to compare their views of candidate planning to those of the cooperating teachers in P-12 schools.

**Table 1. Alignment of Curriculum/Plans to OKLAHOMA Standards**

|  |  |
| --- | --- |
| Curriculum and Plans | Alignment to Oklahoma Standards |
| Designs appropriate plans that provide integrated learning experiences and achieve objectives. | 4.3, 7.2,8.1, |
| Maintains accurate, well organized records of student progress. |  |
| Utilizes valid evaluation procedures communicated to the student. | 8.3 |
| Utilizes multiple assessments to diagnose needs and measure student achievement. | 7.5, 8.3 |
| Provides variety of instructional methods | 8.1, 8.7 |
| Provides for diverse, global perspectives throughout the curriculum | 9.8, 10.6, 11.7, 12.2, 13.3, 14.6, 15.5 |

1. **Brief Analysis of Data Findings**

This reports on the one completer in the year 2012-13

Table 2. Grades for candidates in Secondary Mathematics coursework that require lesson planning.

|  |  |
| --- | --- |
| **Candidate** | MA 3263 |
| 1 | B |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| Mean | 3.0 |

The data on the assessment is acceptable. On the basis of this one completer there is no indication that the program needs modification.

Table 3 reports scores for those same candidates during student teaching on the planning section of the Student Teacher Monitoring Report.

Table 3. Candidates’ scores on planning component of Student Teacher Monitoring Report

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Curriculum and Plans | OKLAHOMA Std | Scores by Candidate | | | | | |
|  |  | 1 | 2 | 3 | 4 | 5 | Mean Scores |
| Designs appropriate daily plans that provide integrated learning experiences that achieve objectives. | 8.4 | **1** |  |  |  |  |  |
| Maintains accurate, well organized records of student progress. |  | **4** |  |  |  |  |  |
| Utilizes valid evaluation procedures communicated to the student. | 7.5 | **1** |  |  |  |  |  |
| Utilizes multiple assessments to diagnose needs and to measure student achievement. | 7.5 | **4** |  |  |  |  |  |
| Provides a variety of instructional materials. | 8.1, 8.2 | **1** |  |  |  |  |  |
| Provides for diverse, global perspectives throughout the curriculum. |  | **4** |  |  |  |  |  |

1=Needs Improvement, 2= Meets Objectives, 3= Target, 4= Not Observed

1. **How the Data Provides Evidence for Meeting the Standards**

The one completer in the last three years, in 2012-13, was able to complete successfully all the assessments of performance on the standards, indicating there is no necessity to revise the program. Reported scores are from observations on Feb. 14, 2013

**Attachment of Assessment Documentation**

1. Alignment of lesson plan rubrics to OKLAHOMA standards- Table 1 above
2. Candidate data in coursework requiring lesson planning- Table 2 above
3. Candidate data in curriculum/planning section of the Student Teacher Monitoring Report - Table 3 above
4. Lesson Plan Rubric- Attachment F

**ATTACHMENT F-LESSON PLAN RUBRIC (SECONDARY MATH)**

**Candidate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lesson\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Oklahoma STANDARD ADDRESSED** | **TARGET**  **(3)** | **MEETS**  **OBJECTIVES**  **(2)** | **NEEDS**  **IMPROVEMENT (1)** | **Candidate Score**  **\*NA=Not applicable to this lesson** |
| **3.1** | Lessons communicate the mathematical thinking coherently and clearly | Lessons communicate mathematical thinking adequately | Lessons communicate in an unclear manner |  |
| **3.2** | Lessons use mathematical language to express ideas precisely | Lessons use mathematical language to express ideas adequately. | Lessons use mathematical language imprecisely or vaguely |  |
| **3.3** | Lessons communicate well the organization of mathematical thinking | Lessons communicate the organization of mathematical thinking | Lessons communicate inadequately the organization of mathematical thinking |  |
| **4.1** | Lessons make meaningful and creative connections between the lesson content and other mathematical ideas. | Lessons make connections between the lesson content and other mathematical ideas. | Lessons make limited connections between the lesson content and other mathematical ideas. |  |
| **4.2** | Lessons apply the mathematical content to many areas outside of mathematics. | Lessons apply the mathematical content to some areas outside of mathematics. | Lessons apply the mathematical content to few areas outside of mathematics. |  |
| **4.3** | Lessons demonstrate how mathematical ideas interconnect to form a coherent whole | Lessons demonstrate the interconnections between mathematical ideas | Lesson leaves mathematical ideas disconnected |  |
| **5.1** | Lesson uses a variety of representations to model and interpret physical, social, and mathematical phenomena | Lesson uses representations to model and interpret physical, social, and mathematical phenomena | Lesson uses limited representations to model and interpret physical, social, and mathematical phenomena |  |
| **5.2** | Lesson exhibits how to create and use representations to organize, record, and communicate mathematical ideas | Lesson uses representations to organize, record, and communicate mathematical ideas | Lesson uses limited representations to organize, record, and communicate mathematical ideas |  |
| **5.3** | Lesson effectively selects, applies, and translates among mathematical representations to solve problems | Lesson translates among mathematical representations to solve problems | Lesson uses minimal mathematical representations to solve problems |  |
| **6.1, 7.6, 8.9** | Candidate uses knowledge of mathematics to select and use appropriate technological tools that further students’ mathematical understanding | Candidate selects and uses appropriate technological tools that help students’ mathematical understanding | Candidate’s use of technological tools is limited or ineffective |  |
| **8.1** | Candidate selects, uses, and determines suitability of curricula and teaching materials for all students, including those with special needs | Candidate selects and uses suitable curricula and teaching materials for all students, including those with special needs | Candidate’s selection of curricula and teaching materials is ainadequate to students’ needs or abilities |  |
| **8.2** | Lessons regularly integrate appropriate concrete materials for learning mathematics | Lessons integrate appropriate concrete materials for learning mathematics | Lessons infrequently integrate appropriate concrete materials for learning mathematics |  |
| **8.3** | Candidate uses multiple strategies, including observation, to assess students’ mathematical knowledge | Candidate uses multiple strategies to assess students’ mathematical knowledge | Candidate assesses students’ mathematical knowledge using few perspectives or inadequate instruments |  |
| **8.4**  **Pass std # \_\_\_** | Lesson effectively addresses appropriate learning goals – indicate PASS standard addressed | Lesson addresses appropriate learning goals – indicate PASS standard addressed | Lesson does not effectively address appropriate learning goals |  |
| **8.7** | Lesson involves a variety of types of instructional strategies | Lesson involves different types of instructional strategies | Lesson involves few types of instructional strategies |  |
| **8.8** | Instruction and assessment develops students’ problem-solving skills and in-depth conceptual understanding and the ability to develop and test generalizations. | Instruction develops students’ problem-solving skills | Lesson is weak in developing students’ problem-solving skills |  |
| **8** | Lesson clearly outlines the steps for teaching the mathematical topic | Lesson outlines the steps for teaching the mathematical topic | Lesson is vague concerning the steps for teaching the mathematical topic |  |
| Total components scored x 3 = max score | | | |  |
| Total score (total points earned for all components scored) | | | |  |
| Total score/max score = total % | | | |  |

85-100% = Target, 84-70%= meets expectations, below 70%= needs improvement

**The total score of the 2012-13 completer on this assessment was 74%, within the ”meets expectations” range.**

**#4 (Required)- PEDAGOGICAL AND PROFESSIONAL KNOWLEDGE, SKILLS, AND DISPOSITIONS: Assessment that demonstrates candidates' knowledge, skills, and dispositions are applied effectively in practice.** OKLAHOMA standards that could be addressed in this assessment include but are not limited to Standards 8. The assessment instrument used in student teaching or the internshipshould be submitted.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): **Student Teaching**
   2. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standards by number, title, and/or standard wording: **The list of competencies addressed by the portfolio is included as Attachment G, the Monitoring Report for Student Teaching: 1.1; 2; 3.1,2,3; 4.1.2.3; 5.1,2,3; 7.1,3,6; 8.1,2,3,4,5,7,8;**
   3. A brief analysis of the data findings: **The one completer in 2013 has met all the competencies required; the scoring summary is in Table 4 below under g..**
   4. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **The one completer in 2013 has met the competencies required**
2. Assessment Documentation
   1. The assessment tool itself or a rich description of the assessment (often the directions given to candidates): **The description of the Student Teaching experience from the Teacher Education Handbook, describing the assessment process, is:**

**Student Teaching** is a twelve week (60 days) placement during the senior year.  This capstone experience calls for the pre-service teacher to work with a cooperating teacher in order to teach. The pre-service teacher may choose to spend all twelve weeks at one location. The cooperating teacher agrees to have the pre-service teacher carry responsibility for the classroom for at least ten of the twelve weeks. This cooperating teacher works closely with the pre-service teacher, mentoring on a daily basis. Supervision of the pre-service teacher comes from a University Supervisor with public school experience in the content area of the pre-service teacher’s specialization. The University Supervisor will visit the classroom at least four times during the teaching experience. The pre-service teacher meets in a face-to-face conference with the University Supervisor at each visit The University Supervisor also communicates with the cooperating teacher and the principal of the school in which the pre-service teacher is placed. Finally, the University Supervisor provides written feedback to the pre-service teacher and to the Associate Dean of Education following each visit.

f. The scoring guide for the assessment is included in Attachment G

g Charts that provide candidate data derived from the assessment:

**Brief Analysis of Data**

Table 4 reports candidates’ scores on the Student Teaching Monitoring Report. Table 4 is revised from the September submission to include the one student completer from Spring 2013. Candidates must score a mean of 1.75 or better on each component of the Student Teaching Monitoring Report. It is expected that they may “need improvement” in some areas at the beginning of the internship. Areas that are “not observed” do not count against the candidates’ score. All (100%) of our candidates earned the minimum expectation on the Student Teacher Monitoring Report. A rubric explaining the criteria for determining performance ratings is also provided (Attachment E). This rubric is revised from the September 2012 submission to better describe ACEI knowledge and performance standards.

**Table 4. Candidates’ Mean Scores on the Student Teacher Monitoring Report 2010-11 to 2012-13**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Candidate (year)  Evaluator | Components | | | | | % of components at minimum criteria |
|  | Classroom Management | Instructional Behaviors | Curriculum/ Planning | Content Knowledge and Attitudes | Dispositions |  |
| Candidate 1(2013)  Cooperating Teacher | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 100% |
| Candidate 1 (2013)  University Supervisor | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 100% |
| Mean Score | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 100% |

**The one completer in 2013 has met the competencies required.**

**ATTACHMENT G**

**STUDENT TEACHER MONITORING REPORT WITH RUBRIC**

Teacher Candidate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ School/Grade \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cooperating Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_University Supervisor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please check each item below for the teacher candidate.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Oklahoma Standard** | **Target**  **(3)** | **Meets Objectives**  **(2)** | **Needs Improvement**  **(1)** | **Score** |
| **Curriculum and Planning** | |  |  |  |
|  | Plans thoughtfully for delivery of the lesson | Plans for delivery of lesson. | Limited planning for delivery of the lesson |  |
| **7.1** | Aligns all curriculum goals with the organization of classroom environments and learning objectives to promote whole-class, small group, and individual work by using effective classroom management strategies and allowing students opportunities for reflection and feedback. | Aligns curriculum goals learning objectives to promote whole-class, small group, and individual work. | Limited alignment of curriculum goals to organization of classroom or learning objectives to promote whole-class, small group, and individual work or provide student feedback. |  |
| **7.3** | Always plans time appropriately to maximize time on task. | Usually plans time to maximize time on task. | Poor planning for time allotment in lessons |  |
|  | Maintains accurate, well organized records of student progress. | Maintains accurate records of student progress. | Does not maintain accurate, well organized records of student progress. |  |
| **8.1, 7.1** | Selects, uses, and determines suitability of curricula and teaching materials for all students, including those with special needs | Selects and uses suitable curricula and teaching materials for all students, including those with special needs | Selection of curricula and teaching materials is inadequate to students’ needs or abilities |  |
| **8.3, 7.6** | Uses multiple strategies, including observation, to assess students’ mathematical knowledge | Uses multiple strategies to assess students’ mathematical knowledge | Assesses students’ mathematical knowledge using few perspectives or inadequate instruments |  |
| **Candidate Knowledge and Dispositions** | | |  |  |  |
| **8.1** | Creates and sustains an inclusive and supportive learning environment in which all students can engage in learning. | Creates an inclusive learning environment in which all students are engaged in learning. | Little inclusiveness or sup­port in learning environment to demonstrate all students engaged in learning. |  |
| **1.1, 8.8** | Designs and uses practices to assist student in developing strategies of problem solving, and to generate new knowledge through problem solving. | Uses practices which assist student in developing habits of problem solving. | Uses few practices designed to assist student in developing habits of problem solving. |  |
| **3.1** | Communicates mathematical thinking coherently and clearly | Communicates mathematical thinking adequately | Communicates in an unclear manner |  |
| **3.2** | Uses mathematical language to express ideas precisely | Uses mathematical language to express ideas adequately. | Uses mathematical language imprecisely or vaguely |  |
| **3.3** | Communicates well the organization of mathematical thinking | Communicates the organization of mathematical thinking | Communicates inadequately the organization of mathematical thinking |  |
| **4.1** | Makes meaningful and creative connections between the lesson content and other mathematical ideas. | Makes connections between the lesson content and other mathematical ideas. | Makes limited connections between the lesson content and other mathematical ideas. | x |
| **4.2** | Applies the mathematical content to many areas outside of mathematics. | Applies the mathematical content to some areas outside of mathematics. | Applies the mathematical content to few areas outside of mathematics. | x |
| **4.3** | Demonstrates how mathematical ideas interconnect to form a coherent whole | Demonstrates the interconnections between mathematical ideas | Leaves mathematical ideas disconnected |  |
| **5.1** | Uses a variety of representations to model and interpret physical, social, and mathematical phenomena | Uses representations to model and interpret physical, social, and mathematical phenomena | Uses limited representations to model and interpret physical, social, and mathematical phenomena |  |
| **5.2** | Exhibits how to create and use representations to organize, record, and communicate mathematical ideas | Uses representations to organize, record, and communicate mathematical ideas | Uses limited representations to organize, record, and communicate mathematical ideas |  |
| **5.3** | Effectively selects, applies, and translates among mathematical representations to solve problems | Translates among mathematical representations to solve problems | Uses minimal mathematical representations to solve problems |  |
| **2** | Encourages and models mathematical reasoning. | Exhibits mathematical reasoning as an instructional strategy. | Uses little mathematical reasoning. |  |
| **Candidate Instructional Behaviors** | |  |  |  |
| **8.2** | Regularly integrates appropriate concrete materials for learning mathematics | Integrates appropriate concrete materials for learning mathematics | Infrequently integrates appropriate concrete materials for learning mathematics |  |
| **8.4**  **Pass std # \_\_\_** | Lesson effectively addresses appropriate learning goals – indicate PASS standard addressed | Lesson addresses appropriate learning goals – indicate PASS standard addressed | Lesson does not effectively address appropriate learning goals |  |
| **8.7** | Lesson involves a variety of types of instructional strategies | Lesson involves different types of instructional strategies | Lesson involves few types of instructional strategies |  |
| **8.8** | Instruction and assessment develops students’ problem-solving skills and in-depth conceptual understanding and the ability to develop and test generalizations. | Instruction develops students’ problem-solving skills | Lesson is weak in developing students’ problem-solving skills |  |
| **8** | Lesson clearly outlines the steps for teaching the mathematical topic | Lesson outlines the steps for teaching the mathematical topic | Lesson is vague concerning the steps for teaching the mathematical topic |  |
| **Classroom Behavior Management** | |  |  |  |
|  | Creates and sustains learning environments that promote respect for, and support of , individual differences of ethnicity, race, language, culture, gender, and ability. | Creates environments that promote respect for, and support of , individual differences of ethnicity, race, language, culture, gender, and ability. | Creates and sustains learning environments that promote respect for, and support of , individual differences of ethnicity, race, language, culture, gender, and ability. |  |
|  | Maintains appropriate and effective classroom management strategies by creating literate classroom communities with varied techniques and structures and providing opportunities for feedback. | Maintains classroom management by aligning curriculum goals to the organization of classroom and promotes varied work structures. | Demonstrates limited ability design instruction to meet the need of all students and maintain classroom management |  |
|  | Encourages and facilitates positive student behaviors | Encourages positive student behaviors | Little encouragement or facilitation of positive student behaviors |  |
|  | Defines expectations of students and consequences of behavior clearly. | Defines expectations of students and consequences of behavior. | Defines consequences of behavior without expectations. |  |
| **Professional Dispositions** | |  |  |  |
|  | Responds well to supervision and modifies behavior or teaching as a result. | Response to supervision is well received. | Responds poorly to supervision. |  |
|  | Maintains appropriate grooming, dress, posture, actions 100 % of the time. | Maintains appropriate grooming, dress, posture, actions 90% of the time. | Does not maintain appropriate grooming, dress, posture, and/or actions. |  |
|  | Demonstrates reliability and dependability in fulfilling all responsibilities 100% of time. | Demonstrates reliability and dependability in fulfilling responsibilities 90% of time. | Does not demonstrate reliability and dependability in fulfilling few responsibilities. |  |
|  | Demonstrates responsible and mature behavior when relating with students 100% of time. | Demonstrates responsible and mature behavior when relating with students 90% of time. | Does not demonstrate responsible and mature behavior when relating with students. |  |
|  | Utilizes conflict resolution skills and demonstrates a basic understanding of group processes 100% of time. | Utilizes conflict resolution skills that demonstrate a basic understanding of group processes 90% of time. | Little utilization of conflict resolution skills or demonstration of understanding of group processes. |  |
|  | Produces effective written and oral communication 100% of time. | Produces effective written and oral communication 90% of time.. | Produces ineffective written and oral communication. |  |
| **8.5** | Demonstrates reflective practice, involvement in professional organization, and collaboration with faculty and other candidates 100% of time. | Demonstrates reflective practice and collaboration with faculty and other candidates 90% of time. | Limited reflective practice, involvement in professional organization, or collaboration with faculty and other candidates. |  |
| **SGU Values** | |  |  |  |
| **:** | Models living a life of balance consistent with the SGU mission and education conceptual framework 100% of time. | Models a life of balance 90% of time. | Limited modeling a life of balance. |  |
|  | Provides meaningful character training and modeling for students 100% of time. | Provides character training and modeling for students 90% of time. | Provides limited character training and modeling for students. |  |
|  | Demonstrates reflective practice consistent with the education conceptual framework100% of time. | Demonstrates reflective practice90% of time. | Demonstrates limited reflective practice. |  |
|  | Models intellectual curiosity, a love of learning, and search for wisdom in interactions with students and other professionals 100% of time | Models intellectual curiosity, love of learning, and search for wisdom 90% of time. | Limited modeling of intellectual curiosity, love of learning, or search for wisdom |  |
|  | Models responsibility and self discipline within the school setting 100% of time. | Models responsibility and self discipline 90% of time.. | Does not model responsibility and self discipline. |  |

**Summative Response Domains:**

**Teacher Management Indicators**

* Preparation – The teacher plans for delivery of the lesson relative to short-term and long-term objectives.
* Routine – The teacher uses minimum class time for noninstructional routines thus maximizing time on task.
* Discipline – The teacher clearly defines expected behavior (encourages positive behavior and controls negative behavior).
* Learning Environment – The teacher establishes rapport with students and provides a pleasant, safe and orderly climate conducive to learning.

**Teacher Instructional Indicators**

* Establishes Objectives – The teacher communicates the instructional objectives to students.
* Stresses Sequence – The teacher shows how the present topic is related to those topics that have been taught or will be taught.
* Relates Objectives – The teacher relates subject topics to existing student experiences.
* Involves All Learners – The teacher uses signaled responses, questioning techniques and/or guided practices to involve all students.
* Explains Content – The teacher teaches the objective through a variety of methods.
* Explains Directions – The teacher gives directions that are clearly stated and related to the learning objectives.
* Models – The teacher demonstrates the desired skills.
* Monitors – The teacher checks to determine if students are progressing toward stated objectives.
* Adjusts Based on Monitoring – The teacher changes instruction based on the results of monitoring.
* Guides Practice – The teacher requires all students to practice newly learned skills while under the direct supervision of the teacher.
* Provides for Independent Practice – The teacher requires students to practice newly learned skills without direct supervision of the teacher.
* Establishes Closure – The teacher summarizes and fits into context what has been taught.

**Teacher Product Indicators**

* Lesson Plans – The teacher writes daily lesson plans to achieve the identified objectives.
* Student Files – The teacher maintains a written record of student progress.
* Grading Patterns – The teacher utilizes grading patterns that are fairly administered and based on identified criteria.

**Student Achievement Indicators**

* Students demonstrate mastery of the Oklahoma stated objectives, *Priority Academic Student Skills (PASS),* through projects, daily assignments, and performance and test scores.

**SGU Conceptual Framework Reflective Practitioner**

* Cycle of study, practice, reflection and refinement
* Knowledge of self, knowledge of learners, knowledge of subject, knowledge of pedagogy
* Practical application and reflection
* Life of balance

**Strengths:**

**Areas for Improvement:**

**Recommendations:**

**Potential for growth/success as a teacher reflecting the SGU conceptual framework, “Reflective Practitioner”:**

Teacher Candidate signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cooperating Teacher signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SGU Supervisor signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#5 (Required)-EFFECTS ON STUDENT LEARNING: Assessment that demonstrates candidate effects on student learning.** OKLAHOMA standards that could be addressed in this assessment include but are not limited to Standards 8. Examples of assessments include those based on student work samples, portfolio tasks, case studies, follow-up studies, and employer surveys.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): **Student Learning Impact Project**. The purpose of this project is that student teachers assess their impact on a class learning experience.

Upon enrollment in ED 4910 Student Teaching, candidates will receive information regarding this project, which is a required artifact for the Teacher Education Portfolio. Projects will be shared during ED 4322 Student Teaching Seminar and presented as part of the university “Senior Seminar” at the end of the semester. The purpose of this project is that student teachers assess their impact on a class learning experience. The student teacher will first choose a unit or series of lessons to use to analyze their impact on student learning. Then, they will identify the baseline assessment data to indicate where the class is currently performing academically. This could be an assessment provided by the candidate or one that the classroom teacher has given. Next, they will describe the goals, objectives and learning outcomes to be identified for this period of learning. After the student teacher begins teaching a portion of the unit/lessons, he/she will administer a pre-assessment to determine their impact on student learning at this point. Then, the student teacher will decide on changes to be made to their teaching/classroom management based on pre-assessment data and a literature review focused on this topic. After this, the student teacher will continue the unit/lessons using the new teaching/management approaches. When the unit/lessons are completed, the student teacher will administer the post assessment. Finally, he/she will analyze their findings to determine the impact on student learning before and after making changes to the unit/lessons, based on a pass rate of 70% or better.

Grading for the SLIP: Grading for this project will be 50% of the grade for ED 4322 Student Teaching Seminar. The SLIP will be written in APA style. The Rubric for grading is included below.

The remaining 50% of the grade in this course will be derived from the Professional Teaching Portfolio.

* 1. A description of how this assessment specifically aligns with the standards it is cited for in Section III. **This is included in the evaluation on page 62 in Attachment H, which includes the entire SLIP information from beginning to end.**

A brief analysis of the data findings: **In 2. g) below, the results of this project is show for the one completer in 2013.**

**These results do not indicate a need for revision of the program**.

* 1. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **The results are consistent with the standards.**

In 2. g) below, the results of this project is shown for the one completer in 2013.

1. Assessment Documentation

e. The assessment tool itself or a rich description of the assessment (often the directions given to candidates):  **A packet is included as Attachment I that gives:**

**Description of the SLIP:**

**Grading for the SLIP:**

**Student Learning Impact Project-Math: Description for Students**

**PART I: DESCRIPTION OF CLASSROOM ENVIRONMENT**

**PART II: ASSESSMENT PLAN**

**PART III: OUTLINE FOR UNIT OF STUDY**

**PART IV: PRE ASSESSMENT RESULTS WORKSHEET**

**PART V: IDENTIFY A PROBLEM (RESEARCH QUESTION)**

**PART VI: LITERATURE REVIEW**

**PART VII: DESCRIPTION OF IMPLEMENTATION OF NEW TEACHING OR MANAGEMENT STRATEGY**

**PART VIII: POST ASSESSMENT RESULTS**

### PART IX: ANALYSIS/REFLECTION

f. The scoring guide for the assessment:  **Attachment I also includes:**

**Student Learning Impact Project Evaluation (MATH Student Learning Impact Project Rubric (MATH)**

g Charts that provide candidate data derived from the assessment: **This shows the results for the one completer in 2013 on the evaluation presented within Attachment H.**

|  |  |
| --- | --- |
| **Knowledge of school culture** | 2 |
| **Knowledge of characteristics of students** | 2 |
| **Significance, challenge, variety and appropriate level** | 2 |
| **Aligned with state and OKLAHOMA standards** | 2 |
| **Variety of instruction and resources** | 2 |
| **Knowledge of Mathematics** | 3 |
| **Alignment of assessments to objectives at appropriate levels** | 2 |
| **Use of available technology** | 3 |
| **Reflective Practice** | 2 |
| **Review of Literature** | 1 |
| **Adaptations to instruction based on assessments** | *2* |
| **Implications of findings** | 2 |

**Total score was 31/36 = 86%, showing he has achieved the purposes of this assessment.**

ATTACHMENT H

Student Learning Impact Project-Math Description for Students

**The Student Learning Impact Project is a requirement associated with** the Student Teaching Internship. The Project is specifically designed to dispose teacher candidates to:

* be reflective practitioners,
* thoughtfully and systematically consider the impact their instruction has upon P-12 student(s), and
* use assessment, formal and informal, formative and summative, to inform instruction.

There are two components to this project. The first involves analyzing a small group or entire class after one unit of study or segment of teaching. The second part involves identifying a problem or topic (research question) and modifying your instruction in order to improve student learning.

Part 1. The purpose of this project is to assess your impact on a class or small group learning experience. Choose one unit, lesson, or group of lessons to analyze your impact on student learning. Identify baseline assessment to gather data you will use to indicate where the class is currently performing and determine your assessment plan for the remainder of the project. Describe the objectives and learning outcomes you have identified for this period of learning, teach the lesson(s) and administer a pre assessment to determine your impact on student learning at this point.

Part 2. The second part of the project involves identifying a problem or topic (research question) and researching this topic. Then monitor the teaching strategies and modifications you employ. During Part 2 you will end the data collection with the final assessment you use for this period of learning. Analyze your findings. Discuss the factors that impact the outcomes, such as gender, attendance, student ability, instructional strategies, and method(s) of assessment. Your analysis will include your data sets and a narrative discussion of your findings. How can you validate your impact on student learning? What can you “take away with you” from this experience?

**The following guidelines will assist you (the student teacher) in this project:**

* Early in the placement, discuss this project with your cooperating teacher and the SGU supervisor to determine the focus of your unit/lessons and when you will teach the unit/lessons
* PLAN AHEAD…schedule the project so that it will be completed in time for analysis, synthesis, and presentation.
* Plan your unit/lessons with your cooperating teacher
* Do your baseline assessment and plan the pre/post assessments
* Make any adjustments to your unit/lessons based upon what you learned from the pre-assessment results and your literature review
* Teach your unit/lessons with the adjustments made from pre-assessment results and literature review
* Complete the post-assessment. Review your project and write your analysis and reflection. Discuss all factors that may have impacted the outcomes, such as cultural differences, student attendance, student ability, and any other assessments (formal or informal) you utilize during this teaching experience. Your analysis will include your data sets and a narrative discussion of your findings. How can you validate your impact on student learning? What can you “take away with you” from this experience?

**Your Project should be organized in the following manner:**

PART I: DESCRIPTION OF CLASSROOM ENVIRONMENT

PART II: ASSESSMENT PLAN

PART III: OUTLINE FOR UNIT OF STUDY

## PART IV: BASELINE/PRE ASSESSMENT

PART V: IDENTIFICATION OF CHANGES TO BE MADE (RESEARCH QUESTION)

PART VI: LITERATURE REVIEW ( This might be conducted prior to deciding what

changes should be made to instruction)

PART VII: IMPLEMENTATION CHANGES BASED ON DATA AND LITERATURE

REVIEW

PART VIII: FINAL ASSESSMENT

PART IX: ANALYSIS OF DATA/REFLECTION

PART I: DESCRIPTION OF CLASSROOM ENVIRONMENT

### Grade level(s) in class\_\_\_\_\_ # of students enrolled in class\_\_\_\_\_

Classroom Grouping (check all that apply)

\_\_\_Whole class \_\_\_Small groups \_\_\_Individual \_\_\_Peer teaching \_\_\_Other:

Instructional Materials (check all that apply)

\_\_\_Textbooks \_\_\_Manipulatives \_\_\_Technology \_\_\_Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#### Resources (select one and list)

\_\_\_Well Equipped \_\_\_Adequately Equipped \_\_\_Poorly Equipped

List available resources:

### Teaching interruptions (select one and describe)

# \_\_\_Few \_\_\_Some \_\_\_Many

# Description:

#### Help available to you (check all that apply.)

\_\_\_Educational Assistants(s) \_\_\_Peer Tutors \_\_\_Parent Volunteers \_\_\_Resource Teachers \_\_\_Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#### Individual Differences

\_\_\_# of students who are culturally diverse \_\_\_# of students with special needs

\_\_\_# of students who are gifted/talented \_\_\_# of students who are Title I

\_\_\_# of students who are male \_\_\_# of students who are female

\_\_\_Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Describe the technological resources available to you in this classroom:

Describe the attitudes toward individual differences in this classroom:

Describe the physical organization of the classroom:

Describe the typical kinds of instructional methods employed in this classroom:

Describe the typical approach to assessment in this classroom:

Indicate any other aspects of this classroom that have not been addressed by the above:

PART II: ASSESSMENT PLAN

(These questions will be answered throughout the project and included in Part II and Part IX)

Describe your baseline assessment and include a copy, if possible. Why did you select this particular assessment?

Describe your pre-assessment method(s) and include a copy if possible. Why did you select this particular pre-assessment method?

Describe your post-assessment method(s) and include a copy if possible. Why did you select this particular post-assessment method?

Describe anything else you did informally and formally during the course of the unit to assess student understanding and progress. How do these assessments affect your analysis of student learning?

Describe how your unit plan goals, objectives, baseline assessment, pre-assessment, instruction, and post-assessment are consistent with one another.

PART III: OUTLINE FOR UNIT OF STUDY

**Complete the table below—add rows to the table as necessary**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Unit Title**  **Grade Level**  **Duration** | | | | |
| **Describe your Unit Goal (s)** |  | | | |
| **Unit Lessons Objectives** | **Standards Alignment**  **(PASS/OKLAHOMA)** | **Assessment of Objective** | **Materials or Resources** | **Instructional groupings and strategies** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Describe your Unit Closure** |  | | | |

## PART IV: PRE ASSESSMENT RESULTS WORKSHEET

**Use a table format like the one below to record the assessment results for each student**

**NOTE: Use pseudonyms or numbers to protect your students’ confidentiality!!**

|  |  |  |
| --- | --- | --- |
| Students Column 1No Names Baseline | Column 2  Pre Assessment | Column 3  Post Assessment |
| 1. |  |  |
| 2. |  |  |
| 3.ETC. |  |  |

**PART V: IDENTIFY A PROBLEM (RESEARCH QUESTION)**

**PART VI: LITERATURE REVIEW**

**PART VII: DESCRIPTION OF IMPLEMENTATION OF NEW TEACHING OR MANAGEMENT STRATEGY**

**PART VIII: POST ASSESSMENT RESULTS**

### PART IX: ANALYSIS/REFLECTION

* **How did the pre-assessment results inform your instructional plan—what modifications or changes did you make based upon the pre-assessment results?**
* How many students accomplished the unit’s goals/objectives? How do you know?
* How many students did not meet the unit’s goals/objectives? How do you know?
* What will be done to ensure that students not meeting the unit’s goals/objectives learn the material and/or what can be done to help students who did not master the unit’s goals/objectives to improve in these areas?
* Are there circumstances or conditions that should be considered regarding the students who did not meet the unit’s goals/objectives? Explain.
* Based on the results you obtained and your experience with this unit of instruction, what will you do differently in planning, teaching, and/or assessment the next time you teach this content?
* Describe your role in supporting student learning.
* Describe how you felt about this process.

**Student Learning Impact Project Evaluation (MATH)**

**The right-hand column gives the OKLAHOMA standard assessed (right hand column)**

**Candidate Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Faculty Assessor\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_**

**Circle the rating for each area and return the completed rubric to the University Supervisor. For ratings of 1 please indicate directly on the rubric the rationale for the rating.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Knowledge of school culture** | Candidate integrates understanding of the characteristics of the school and classroom into instruction/assessment to enhance student learning. | 3  Excellent | 2  Expected | 1  Unacceptable |  |
| **Knowledge of characteristics of students** | Candidate displays knowledge and respect for student cultural differences and incorporates that knowledge into classroom instruction and assessment. | 3  Excellent | 2  Expected | 1  Unacceptable | 7.1 |
| **Significance, challenge, variety and appropriate level** | Candidate creates and sustains several types or levels of learning that are significant, challenging, and developmentally appropriate in which all students can learn. | 3  Excellent | 2  Expected | 1  Unacceptable | 7.4, 8.2, 8.3 |
| **Aligned with state and OKLAHOMA standards** | Candidate knows the rationale for diverse curricula and create instruction consistent with state and OKLAHOMA standards. | 3  Excellent | 2  Expected | 1  Unacceptable | 8.4 |
| **Variety of instruction and resources** | Candidate possesses a deep understanding of how students learn mathematics and of the pedagogical knowledge specific to mathematics teaching and learning. | 3  Excellent | 2  Expected | 1  Unacceptable | 8.1 |
| **Knowledge of Mathematics** | Candidate integrates knowledge mathematics problem solving, reasoning and proof, and mathematical communication, connections and representation in instruction/assessment. | 3  Excellent | 2  Expected | 1  Unacceptable | 1, 2, 3, 4, 5, 7.5 |
| **Alignment of assessments to objectives at appropriate levels** | Assessments are aligned with objectives and adapted to meet the needs of individual students so that all students understand what they know and can do. | 3  Excellent | 2  Expected | 1  Unacceptable | 7.5, 8.3 |
| **Use of available technology** | Candidate embraces technology as an essential tool for teaching and learning mathematics. | 3  Excellent | 2  Expected | 1  Unacceptable | 6, 7.6 |
| **Reflective Practice** | Candidate demonstrates reflective practice and uses it to adapt instruction. | 3  Excellent | 2  Expected | 1  Unacceptable |  |
| **Review of Literature** | Candidate summarizes theories of best practice, categorizes them, explains how the literature relates to their own topic and uses this information to make adjustments in their teaching. | 3  Excellent | 2  Expected | 1  Unacceptable | 8.6 |
| **Adaptations to instruction based on assessments** | Candidate makes appropriate adaptations to the instructional plan based on the individual student needs; these modifications are based on analysis of student performance, best practice and/or contextual factors | 3  Excellent | 2  Expected | 1  Unacceptable | 8.3 |
| **Implications of findings** | Candidate provides ideas for redesigning learning goals, assessment, and instruction and explains why these modifications would improve student learning. | 3  Excellent | 2  Expected | 1  Unacceptable | 8.7 |

**Comments:**

**Student Learning Impact Project Rubric (MATH)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Knowledge of school culture** | **Excellent (3)**  Candidate integrates understanding of the characteristics of the school and classroom into instruction/ assessment to enhance student learning. | **Expected (2)**  Candidate uses understanding of the characteristics of the school and classroom to plan instruction and assessment that support student learning. | **Unacceptable (1)**  Candidate displays limited understanding of the characteristics of the school and classroom that may affect learning. | |
| **Knowledge of character- istics of students** | Candidate displays knowledge and respect for student cultural differences and incorporates that knowledge into classroom instruction and assessment. | Candidate displays a respect of student differences that may affect learning by accommodating that diversity in teaching. | Candidate displays little respect of student differences through accommodations in instruction and assessment. | |
| **Significance, challenge, variety and appropriate level** | Candidate creates and sustains several types or levels of learning, which are significant, challenging, and developmentally appropriate in which all students can learn. | Candidate creates several types or levels of learning, which are significant, challenging, and developmentally appropriate in which all students can learn | Candidate shows little evidence of creating challenging, significant, or developmentally appropriate learning in which all students can learn. | |
| **Objectives aligned with state and OKLAHOMA standards** | Candidates know the rationale for diverse curricula and create instruction consistent with state and OKLAHOMA standards. | Candidates select curricula and create instruction consistent with state and OKLAHOMA standards. | Candidates show limited knowledge of curricula and create instruction consistent with state and OKLAHOMA standards. |
| **Variety of instruction and resources** | Candidate creates varied structures, instructional techniques, resources and management styles in which all students can learn. | Candidate creates varied structures, instructional techniques, and resources in which all students can learn. | Candidate creates limited structures, instructional techniques, and resources in which all students can learn. |
| **Knowledge of Mathematics** | Candidate integrates knowledge of mathematics problem solving, reasoning and proof, and uses mathematical communication , connections, representation and technology in instruction/ assessment | Candidate displays knowledge of mathematics problem solving, reasoning and proof, and uses mathematical communication , connections, representation and technology in instruction/ assessment | Candidate shows little knowledge of mathematics problem solving, reasoning and proof, and uses limited mathematical communication , connections, representation and technology in instruction/ assessment |
| **Alignment of assessments to objectives at appropriate levels** | Assessments aligned with objectives and adapted to meet the needs of individual students so that all students understand what they know and can do. | Assessments aligned with objectives and adapted to meet the needs of individual students. | Limited alignment of assessment with objectives and adapted to meet the needs of individual students. |
| **Use of available technology** | Candidate helps students use technology to enhance their own mathematical learning. | Candidate uses current technology in their instruction. | Candidate shows limited use current technology in their math instruction. |
| **Reflective Practice** | Candidate demonstrates reflective practice and uses it to adapt instruction | Candidate demonstrates reflective practice . | Candidate demonstrates limited reflective practice. |
| **Review of Literature** | Candidate summarizes theories of best practice, categorizes them, explains how the literature relates to their own topic and uses this information to make adjustments in their teaching. | Candidate uses theories of best practice to adapt instruction. | Candidate uses limited knowledge of current literature to adapt instruction. |
| **Adaptations made to instruction based on assessments** | Candidate makes appropriate adaptations to the instructional plan based on the individual student needs; these modifications are based on analysis of student performance, best practice and/or contextual factors. | Candidate makes adaptations to the instructional plan based on the individual student needs. | Limited adaptations to the instructional plan based on the individual student needs. |
| **Implications of findings** | Candidate provides ideas for redesigning learning goals, assessment, and/or instruction and explains why these adaptations would improve student performance to all concerned parties. | Candidate provides ideas for redesigning learning goals, assessment , and/or instruction. | Candidate provides limited ideas for redesigning learning goals, assessment to all concerned parties. |

**#6 (Required)- Additional assessment that addresses Oklahoma standards.** Examples of assessments include evaluations of field experiences, case studies, portfolio tasks, and licensure tests not reported in #1.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): Oklahoma General Education Test (OGET)
   2. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standards by number, title, and/or standard wording: **see Attachment B: The chart for the OSAT also includes entries for the OGET.**
   3. A brief analysis of the data findings: **The one completer in 2012-13 performed excellently on the math-related portion of the test.**
   4. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **The one completer’s results show he has met the standards indicated in Attachment J.**
2. Assessment Documentation

e. The assessment tool itself or a rich description of the assessment (often the directions given to candidates): **The list of competencies addressed by the OGET is included as Attachment J**

f. The scoring guide for the assessment: **The test consists of 80 selected-response questions (85% of total points) and one constructed-response assignment (15%). The standards for evaluating the constructed response are the same as for the OSAT included under Attachment L**

**A passing score is 240 points of a total of 300.**

g Charts that provide candidate data derived from the assessment:

The results from the one completer in 2012-13 were:

subscores: 291 196 **300 300** 291 240

total: 272

**third score is Critical Thinking: Mathematics**

**fourth score is Computation**

**ATTACHMENT I: TEST COMPETENCIES: OGET**

**SUBAREAS:**

I. Critical Thinking Skills: Reading and Communications

II. Communication Skills

III. Critical Thinking Skills: Mathematics

IV. Computation Skills

V. Liberal Studies: Science, Art and Literature, Social Sciences

VI. Critical Thinking Skills: Writing

**SUBAREA I—CRITICAL THINKING SKILLS: READING AND COMMUNICATIONS**

**Competency 0001**

**Identify a writer's point of view and intended meaning.**

The following topics are examples of content that may be covered under this competency.

Identify the statement that best expresses the main idea of a paragraph or passage.

Recognize ideas that support, illustrate, or elaborate the main idea of a paragraph or passage.

Use the content, word choice, and phrasing of a passage to determine a writer's opinions or point of view (e.g., belief, position on an issue).

**Competency 0002**

**Analyze the relationship among ideas in written material.**

The following topics are examples of content that may be covered under this competency.

Identify the sequence of events or steps presented in technical, scientific, or research material.

Identify cause-effect relationships from information in a passage.

Analyze relationships between ideas in opposition (e.g., pro and con).

Identify a solution to a problem presented in a passage.

Draw conclusions inductively and deductively from information stated or implied in a passage.

**Competency 0003**

**Use critical reasoning skills to evaluate written material.**

The following topics are examples of content that may be covered under this competency.

Draw valid conclusions using information from written communications.

Recognize the stated or implied assumptions on which the validity of an argument depends.

Determine the relevance or importance of particular facts, examples, or graphic data to a writer's argument.

Use inductive and deductive reasoning to recognize fallacies in the logic of a writer's argument.

Evaluate the validity of analogies used in written material.

Distinguish between fact and opinion in written material.

Assess the credibility, objectivity, or bias of the writer or source of written material.

**Competency 0004**

**Recognize the roles of purpose and audience in written communication.**

The following topics are examples of content that may be covered under this competency.

Recognize a writer's stated or implied purpose for writing (e.g., to persuade, to describe).

Evaluate the appropriateness of written material for a specific purpose or audience.

Recognize the likely effect on an audience of a writer's choice of a particular word or words (e.g., to evoke sympathy, to undermine an opposing point of view).

**Competency 0005**

**Recognize unity, focus, and development in writing.**

The following topics are examples of content that may be covered under this competency.

Recognize unnecessary shifts in point of view (e.g., shifts from first to third person) or distracting details that impair the development of the main idea in a piece of writing.

Recognize revisions that improve the unity and focus of a piece of writing.

Recognize examples of well-developed writing.

**SUBAREA II—COMMUNICATION SKILLS**

**Competency 0006**

**Recognize effective organization in writing.**

The following topics are examples of content that may be covered under this competency.

Recognize methods of paragraph organization.

Reorganize sentences to improve cohesion and the effective sequence of ideas.

Recognize the appropriate use of transitional words or phrases to convey text structure (e.g., however, therefore).

**Competency 0007**

**Recognize sentences that effectively communicate intended messages.**

The following topics are examples of content that may be covered under this competency.

Recognize ineffective repetition and inefficiency in sentence construction.

Identify effective placement of modifiers, parallel structure, and use of negatives in sentence formation.

Recognize imprecise and inappropriate word choices.

**Competency 0008**

**Recognize standard conventions of formal written English usage in the United States.**

The following topics are examples of content that may be covered under this competency.

Recognize the standard use of verb forms.

Recognize the standard use of pronouns.

Recognize the standard formation and use of adverbs, adjectives, comparatives and superlatives, and plural and possessive forms of nouns.

Recognize standard punctuation.

Identify sentence fragments and run-on sentences (e.g., fused sentences, comma splices).

Identify standard subject-verb agreement.

**SUBAREA III—CRITICAL THINKING SKILLS: MATHEMATICS**

**Competency 0009**

**Solve problems involving data interpretation and analysis.**

The following topics are examples of content that may be covered under this competency.

Interpret information from line graphs, bar graphs, histograms, pictographs, and pie charts.

Interpret data from tables.

Recognize appropriate representations of various data in graphic form.

**Competency 0010**

**Apply mathematical reasoning skills to analyze patterns and solve problems.**

The following topics are examples of content that may be covered under this competency.

Draw conclusions using inductive reasoning.

Draw conclusions using deductive reasoning.

**Competency 0011**

**Solve applied problems using a combination of mathematical skills (including word problems involving one and two variables).**

The following topics are examples of content that may be covered under this competency.

Apply combinations of algebraic skills to solve problems.

Apply combinations of mathematical skills to solve a series of related problems.

Identify the algebraic equivalent of a stated relationship.

Identify the proper equation or expression to solve word problems involving one and two variables.

**SUBAREA IV—COMPUTATION SKILLS**

**Competency 0012**

**Solve word problems involving integers, fractions, decimals, and units of measurement.**

The following topics are examples of content that may be covered under this competency.

Solve word problems involving integers, fractions, and decimals (including percentages).

Solve word problems involving ratio and proportions.

Solve word problems involving units of measurement and conversions (including scientific notation).

**Competency 0013**

**Graph and solve algebraic equations with one and two variables.**

The following topics are examples of content that may be covered under this competency.

Graph numbers or number relationships.

Find the value of the unknown in a given one-variable equation.

Express one variable in terms of a second variable in two-variable equations.

**Competency 0014**

**Solve problems involving geometric figures.**

The following topics are examples of content that may be covered under this competency.

Solve problems involving two-dimensional geometric figures (e.g., perimeter and area problems).

Solve problems involving three-dimensional geometric figures (e.g., volume and surface area problems).

**SUBAREA V—LIBERAL STUDIES: SCIENCE, ART AND LITERATURE, SOCIAL SCIENCES**

**Competency 0015**

**Understand and analyze major scientific principles, concepts, and theories, and apply skills,**

**principles, and procedures associated with scientific inquiry.**

The following topics are examples of content that may be covered under this competency.

Analyze the nature of scientific thought and inquiry.

Use an appropriate illustration or physical model to represent a scientific theory or concept.

Relate major scientific principles, concepts, or theories to everyday phenomena.

Apply scientific methods and principles to assess real-world questions or problems.

**Competency 0016**

**Understand and analyze the historical development and cultural contexts of science and technology and the impact of science on society.**

The following topics are examples of content that may be covered under this competency.

Analyze the historical development and impact of key scientific ideas and discoveries.

Evaluate factors that have promoted or hindered developments in science and technology.

Assess the implications of recent developments in science and technology.

**Competency 0017**

**Understand, interpret, and compare representations from the visual and performing arts from different periods and cultures, and understand the relationship of works of art to their social and historical contexts.**

The following topics are examples of content that may be covered under this competency.

Identify and evaluate major historical and contemporary developments and movements in the arts.

Interpret and compare representations of works of art from different periods and cultures in terms of form, subject, theme, mood, or technique.

Analyze ways in which the content of a given work of art reflects or influences a specific social or historical context.

**Competency 0018**

**Understand, interpret, and compare examples of literature from different periods and cultures, and understand the relationship of works of literature to their social and historical contexts.**

The following topics are examples of content that may be covered under this competency.

Identify and evaluate major historical and contemporary developments and movements in world literature.

Interpret and compare works of literature from different periods and cultures in terms of form, subject, theme, mood, or technique.

Analyze ways in which the content of a given work of literature reflects or influences a specific social or historical context.

**Competency 0019**

**Understand and analyze the major political, social, economic, scientific, and cultural developments**

**that shaped the course of history.**

The following topics are examples of content that may be covered under this competency.

Demonstrate an understanding of the principal characteristics and important cultural values of the major civilizations of Asia, Africa, Europe, and the Americas.

Evaluate the influence of varied ideas, movements, and historical developments on Western religious, artistic, scientific, and political ideas and beliefs (e.g., the Renaissance, the Reformation, the French Revolution).

Analyze the major causes of varied historical developments (e.g., the Industrial Revolution, Colonialism) and evaluate their impact on the politics and culture of the modern world.

Demonstrate knowledge of the major political movements of the twentieth century and analyze their

influence on contemporary societies.

Demonstrate an understanding of significant individuals, movements, ideas, and conflicts that have shaped U.S. history and culture (e.g., the Civil War, the New Deal).

**Competency 0020**

**Understand and analyze the concepts of freedom, diversity, and tolerance, their historical development, and their influence in human history.**

The following topics are examples of content that may be covered under this competency.

Demonstrate an understanding of the democratic principles embodied in the Declaration of Independence and the United States Constitution.

Analyze ways in which the evolution of democracy reflects a specific social or historical context.

Evaluate movements that have influenced the concepts of freedom, diversity, and tolerance.

**SUBAREA VI—CRITICAL THINKING SKILLS: WRITING**

**Competency 0021**

**Prepare an organized, developed composition in edited English in response to instructions regarding content, purpose, and audience.**

The following topics are examples of content that may be covered under this competency.

Demonstrate the ability to prepare a unified and focused piece of writing on a given topic using language and style appropriate to a specified audience, purpose, and occasion.

Demonstrate the ability to take a position on a contemporary social or political issue and defend that position with reasoned arguments and supporting examples.

Demonstrate the ability to use effective sentence structure and apply the standards of edited English.

Demonstrate the ability to spell, capitalize, and punctuate according to the standards of edited English.

**#7 (Optional): Additional assessment that addresses OKLAHOMA standards.** Examples of assessments include evaluations of field experiences, case studies, portfolio tasks, and licensure tests not reported in #1.

1. A two-page narrative that includes the following:
   1. A brief description of the assessment and its use in the program (one sentence may be sufficient): Oklahoma Professional Teaching Examination (OPTE)
   2. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standards by number, title, and/or standard wording: **see Attachment B: The chart for the OSAT also includes entries for the OPTE.**
   3. A brief analysis of the data findings: One  **completers in the past three years.**
   4. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **No completers in the past three years.**
2. **247 277 245 231 228 229**
3. **Total: 250**
4. Assessment Documentation

e. The assessment tool itself or a rich description of the assessment (often the directions given to candidates): **The list of competencies addressed by the OPTE is included as Attachment K**

f. The scoring guide for the assessment: **The test consists of 80 selected-response questions (85% of total points) and one constructed-response assignment (15%). The standards for evaluating the constructed response are the same as for the OSAT included under Assessment #1.**

**A passing score is 240 points of a total of 300.**

g Charts that provide candidate data derived from the assessment: **No completers in the past three years.**

**ATTACHMENT J: TEST COMPETENCIES: OPTE: 6–12**

**SUBAREAS:**

I. Learners and the Learning Environment

II. Instruction and Assessment

III. The Professional Environment

**The content covered by the Oklahoma Professional Teaching Examination is organized into subareas of test content as described below. The Oklahoma Professional Teaching Examination is further divided into two components: a selected-response component and a constructed-response component.**

**SUBAREA I—LEARNERS AND THE LEARNING ENVIRONMENT**

**Competency 0001**

**The teacher understands how students learn and develop and can provide learning opportunities that support their intellectual, social, and physical development at all grade levels, including early childhood, elementary, middle level, and secondary.**

The following topics are examples of content that may be covered under this competency.

The teacher understands the processes by which students acquire knowledge and construct meaning.

The teacher understands developmental characteristics of students and how developmental factors affect learning.

The teacher recognizes ways in which a student's development in one domain (e.g., physical, social-emotional, intellectual) may affect other domains.

The teacher applies strategies for promoting learning among students at different developmental levels.

**Competency 0002**

**The teacher understands that students vary in their approaches to learning and creates instructional opportunities that are adaptable to individual differences of learners.**

The following topics are examples of content that may be covered under this competency.

The teacher understands differences in students' learning strengths and needs (e.g., related to variations in learning style, multiple intelligences).

The teacher recognizes and understands factors that may affect learning and performance and adapts instruction to meet the needs of students based on various factors (e.g., family situations, cultural and language differences, socio-economic circumstances, prior learning, special talents, and disabilities).

The teacher recognizes how to locate and secure resources and support services to meet varied student needs.

**Competency 0003**

**The teacher uses best practices related to motivation and behavior to create learning environments that encourage positive social interaction, self-motivation, and active engagement in learning, thus providing opportunities for success.**

The following topics are examples of content that may be covered under this competency.

The teacher analyzes factors that affect students' motivation to learn (e.g., expectations of parents/guardians and teachers, prior experiences in school).

The teacher applies instructional strategies that motivate students to learn and achieve (e.g., relating lessons to students' interests, providing opportunities for students to exercise choice in learning).

The teacher applies principles of effective classroom management (e.g., in relation to appropriate discipline, student decision making, standards of behavior) to establish an atmosphere of cooperation, trust, and mutual support.

The teacher analyzes how aspects of the physical environment (e.g., spatial arrangements, resources, classroom displays) affect learning.

**Competency 0004**

**The teacher understands the process of continuous lifelong learning, the concept of making learning enjoyable, and the need for a willingness to change when the change leads to greater student learning and development.**

The following topics are examples of content that may be covered under this competency.

The teacher encourages students to participate in learning activities that involve intellectual challenge, exploration, and reflection.

The teacher models for students a willingness to consider new ideas or modify behavior in response to new information or changing circumstances.

The teacher designs instructional activities that respond to student initiatives and preferences and that provide opportunities for students to explore topics that are meaningful to them.

The teacher helps students relate classroom learning to their lives outside school and to their personal goals.

**SUBAREA II—INSTRUCTION AND ASSESSMENT**

**Competency 0005**

**The teacher plans instruction based upon curriculum goals, knowledge of the teaching/learning process, subject matter, students' abilities and differences, and the community, and adapts instruction based upon assessment and reflection.**

The following topics are examples of content that may be covered under this competency.

The teacher applies principles and procedures used in instructional planning (e.g., defining lesson or unit objectives, developing lesson plans, choosing appropriate learning activities).

The teacher recognizes key factors to consider when planning instruction (e.g., goals, students' characteristics and prior experiences, community characteristics, cultural and ethnic diversity, available time and resources, opportunities for making interdisciplinary connections).

The teacher analyzes and revises aspects of a given lesson plan (e.g., organization, approach, activities, comprehensiveness) in response to changing circumstances (e.g., changes in students' interests, opportunities for involvement of parents/guardians/families, availability of resources, current events).

The teacher interprets formal and informal assessment results and uses them to plan or modify learning activities.

The teacher uses a variety of resources (including technology) in planning and implementing instructional activities.

**Competency 0006**

**The teacher understands curriculum integration processes and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills and effective use of technology.**

The following topics are examples of content that may be covered under this competency.

The teacher understands ways to integrate and implement different curriculum areas to promote student learning.

The teacher understands principles and techniques associated with specific instructional strategies (e.g., cooperative learning, direct instruction, discovery learning, whole-group discussion, computer-assisted instruction, interdisciplinary instruction).

The teacher applies a variety of instructional approaches to promote the development of higher-order thinking skills and encourage independent learning.

The teacher analyzes how various teacher roles (e.g., instructor, facilitator, coach, audience) and student roles (e.g., self-directed learner, group participant, passive observer) may affect learning processes and outcomes.

The teacher recognizes ways to enhance learning through the use of print, manipulative, technological, and human resources (e.g., primary documents, unit-counting blocks, computers and other educational technologies, community experts).

**Competency 0007**

**The teacher develops a knowledge of and uses a variety of effective communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.**

The following topics are examples of content that may be covered under this competency.

The teacher applies strategies for adapting communication to facilitate student understanding (e.g., providing examples; simplifying complex problems; using visual, aural, and kinesthetic cues).

The teacher fosters students' expressive and receptive communication skills by modeling effective strategies for conveying information, collaborating, questioning, and responding.

The teacher interacts with students in ways that demonstrate respect for and sensitivity to individual differences.

The teacher understands how to use a variety of communication tools, including computers and other educational technologies, to enrich learning.

**Competency 0008**

**The teacher understands and uses a variety of assessment strategies to evaluate and modify the teaching/learning process ensuring the continuous intellectual, social, and physical development of the learner.**

The following topics are examples of content that may be covered under this competency.

The teacher uses assessment to adapt teaching to address the intellectual, social, and physical development of the student.

The teacher understands the characteristics and appropriate uses of formal and informal assessments (e.g., criterion and norm-referenced instruments, teacher-designed classroom tests, portfolios, peer assessment, student self-assessment, observation).

The teacher understands measurement principles and assessment concepts (e.g., validity, reliability, bias).

The teacher effectively interprets and communicates assessment results to students, parents/guardians, and colleagues.

**Competency 0009**

**The teacher shall have an understanding of the importance of assisting students with career awareness and the application of career concepts to the academic curriculum.**

The following topics are examples of content that may be covered under this competency.

The teacher applies strategies to increase students' awareness of connections between academic learning and the workplace (e.g., introducing young children to different types of jobs, integrating authentic learning/work experiences into the curriculum, expanding students' knowledge of career opportunities).

The teacher understands how to involve employers and members of the community in career awareness and preparation activities.

The teacher plans and implements learning experiences to address racial, socio-economic, ethnic, and gender stereotyping related to careers.

The teacher plans and implements instructional activities that help students develop skills needed in the workplace (e.g., working in teams, problem solving, communication).

**SUBAREA III—THE PROFESSIONAL ENVIRONMENT**

**Competency 0010**

**The teacher evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community), modifies those actions when needed, and actively seeks opportunities for continued professional growth.**

The following topics are examples of content that may be covered under this competency.

The teacher applies strategies for self-assessment (e.g., with respect to effectiveness of instruction; relations with colleagues; gender, cultural, and other biases; and interactions with parents/guardians/family members).

The teacher understands how to evaluate and respond to feedback (e.g., from supervisors, students, parents/guardians, colleagues).

The teacher utilizes resources to promote professional growth (e.g., colleagues, professional associations, journals) and selects appropriate professional development activities (e.g., inservice training programs, continuing education).

The teacher collaborates with other members of the school community (e.g., other teachers, mentors, supervisors, special needs professionals, administrators, support staff) to enhance skills and solve problems.

**Competency 0011**

**The teacher understands the State teacher evaluation process, "Oklahoma Criteria for Effective Teaching Performance," and how to incorporate these criteria in designing instructional strategies.**

The following topics are examples of content that may be covered under this competency.

The teacher understands and incorporates state-mandated standards for teacher performance (e.g., instruction, scheduling, record keeping).

The teacher recognizes specific practices that meet or fail to meet OCETP standards.

The teacher demonstrates knowledge of OCETP criteria for evaluating teacher skills in managing and delivering instruction.

The teacher applies OCETP criteria in reflecting on one's management and instructional practices and determining whether modifications are necessary.

**Competency 0012**

**The teacher fosters positive interaction with school colleagues, parents/families, and organizations in the community to actively engage them in support of students' learning and well-being.**

The following topics are examples of content that may be covered under this competency.

The teacher applies strategies for active collaboration with colleagues (e.g., other teachers, mentors, supervisors, special needs professionals, administrators, support staff) to address the needs of students and improve the learning environment.

The teacher understands schools and school systems within the context of the larger community.

The teacher applies strategies for initiating and maintaining effective communication with parents/guardians and recognizing factors that may promote communication in given circumstances.

The teacher recognizes how to use community resources to enrich learning experiences.

**Competency 0013**

**The teacher understands the legal aspects of teaching, including the rights of students and parents/families, as well as the legal rights and responsibilities of the teacher.**

The following topics are examples of content that may be covered under this competency.

The teacher applies knowledge of teachers' legal rights and responsibilities (e.g., with regard to student discipline, situations involving suspected child abuse, the expression of political views).

The teacher understands laws related to students' rights (e.g., assuring equal access to education, providing an appropriate education for students with special needs, maintaining confidentiality, ensuring due process).

The teacher applies knowledge of the rights and responsibilities of parents/guardians in various situations (e.g., in relation to student records, school attendance).

**CONSTRUCTED-RESPONSE MODULES**

The content covered by the modules described below is assessed through the constructed-response component of the Oklahoma Professional Teaching Examination.

**CRITICAL ANALYSIS MODULE: Learners and the Learning Environment**

**(This module requires candidates to construct written responses that demonstrate an understanding of aspects of professional knowledge as described in Subarea I. Assignments and responses for this module will relate to Competencies 0001, 0002, 0003, and/or 0004 of the test framework.)**

This component of the assessment requires candidates to exercise critical thinking skills to analyze educational issues related to learners and the learning environment and present their own opinions in a coherent and convincing way. For example, the candidate is presented with a brief summary of a contemporary educational issue or topic (e.g., student development patterns, theories of learning, motivational techniques). The candidate responds in writing by presenting his or her own point of view on the topic and supporting that position with reasoned arguments and appropriate examples.

**STUDENT INQUIRY MODULE: Instruction and Assessment**

**(This module requires candidates to construct written responses that demonstrate an understanding of aspects of professional knowledge as described in Subarea II. Assignments and responses for this module will relate to Competencies 0005, 0006, 0007, 0008, and/or 0009 of the test framework.)**

This component of the assessment requires the candidate to apply general principles of teaching and learning in planning, delivering, and adapting instruction and assessment. For example, the candidate is presented with an instructional goal (e.g., fostering students' critical thinking skills, providing opportunities for students to explore a topic using a range of learning modes, helping students relate instructional content to their own experience). The candidate responds in writing by describing and evaluating instructional strategies and activities designed to help students attain that goal.

**TEACHER ASSIGNMENT MODULE: The Professional Environment**

**(This module requires candidates to construct written responses that demonstrate an understanding of aspects of professional knowledge as described in Subarea III. Assignments and responses for this module will relate to Competencies 0010, 0011, 0012, and/or 0013 of the test framework.)**

This component of the assessment requires the candidate to reflect on and apply knowledge of the professional roles and responsibilities of the teacher. For example, the candidate is presented with a situation arising from an interaction with colleagues, parents/guardians, or community members and requiring some form of action. The candidate responds in writing by identifying and discussing important issues raised by the situation, describing an appropriate course of action, and explaining how the proposed action is likely to lead to a desirable outcome.

**#8 (Optional): Additional assessment that addresses OKLAHOMA standards.** Examples of assessments include evaluations of field experiences, case studies, portfolio tasks, and licensure tests not reported in #1.

**Teacher Education Portfolio.**

Instituted in the fall 2009, every student at St. Gregory's University now completes a comprehensive learning portfolio, which consists of artifacts representative of their time on campus that reflect on their individual growth as a person of balance, generosity and integrity, leading a life of learning. The portfolio is built over a student’s entire time at St Gregory’s and, as such should reflect not only achievements in learning and personal development, but the growth and accomplishments in a variety of areas which reflect the “SGU experience” most effectively.

The first checkpoint for evaluation of the portfolio is in the spring of the freshman year. This is the writing portfolio, which is coordinated by instructors of the freshmen composition courses and the *Office of Institutional Assessment*. The writing portfolio contains samples of writing, gathered from a variety of coursework that address Common Core Student Learning Outcomes (SLO). The second checkpoint is spring of the sophomore year, submitted in Traditions and Conversations Seminar IV (HU2122), and should continue to address Common Core SLOs, and, if applicable, one or two within the student’s major. Education majors will submit their portfolios to the Director of Teacher Education, as part of the admission process to the program. The final checkpoint is during the Senior Seminar or, for education majors, during the Student Teaching Seminar (ED4322).

The Teacher Education Portfolio is a documented profile of education candidates’ accomplishments, learning, and strengths related to the competencies, standards, and outcomes established by the Oklahoma Commission on Teacher Preparation, State Regents, Oklahoma State Department of Education and the Teacher Education Department at St. Gregory's University. The SGU teacher education portfolio is based on The Oklahoma General Competencies for Licensure and Certification, the mission of St. Gregory’s and the Conceptual Framework of the SGU Department of Education.It represents the candidate's professional knowledge, performance, experiences, and dispositions.There are a number of purposes for development of the Teacher Education Portfolio:

* To demonstrate the talents, skills, and experiences of the teacher candidate. This demonstration indicates professional growth in becoming an effective teacher.
* To demonstrate a unique, fluid and evolving display of life-long learning. The candidate bases the portfolio on personal goals as they relate to state standards and the impact of learning communities.
* To present evidence that SGU is providing initial and on-going assessment that focuses on opportunities and experiences which lead to development of state and national competencies, standards, and outcomes.
* To demonstrate to prospective employers the evidence of a candidate's professional growth.
  1. A description of how this assessment specifically aligns with the standards it is cited for in Section III. Cite SPA standards by number, title, and/or standard wording: **see Attachment F**: **Alignment of Competencies required in the portfolio with OKLAHOMA standards**
  2. A brief analysis of the data findings: **The results listed in paragraph g) indicate that the one completer in 2012-13 met the standards.**
  3. An interpretation of how that data provides evidence for meeting standards, indicating the specific SPA standards by number, title, and/or standard wording: **The portfolio is a picture of the completer’s activities during his participation in the education program, and shows he has achieved the competencies shown in the attachments.**

1. Assessment Documentation
   1. The assessment tool itself or a rich description of the assessment (often the directions given to candidates): **This is a collection of artifacts from the teacher candidate’s experience plus reflections that show that the candidate has achieved the competencies listed in Attachment F, competencies from the OKLAHOMA and additional ones from the St. Gregory’s education program.**
   2. The rubric for grading the portfolio is included as Attachment G

**When the university altered its college-wide standards for major portfolios to 15 Major Core Outcomes, the Education Department did likewise. The modified competencies and grading rubric are shown in Addenda I and II.**

g Charts that provide candidate data derived from the assessment:

**The scores on those outcomes for the one completer were:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Outcome | Score | Outcome | Score | Outcome | Score |
| **1** | **8.0** | **6** | **6.0** | **11** | **9.0** |
| **2** | **9.0** | **7** | **7.5** | **12** | **9.0** |
| **3** | **7.0** | **8** | **6.5** | **13** | **7.0** |
| **4** | **6.0** | **9** | **6.5** | **14** | **5.0** |
| **5** | **5.5** | **10** | **4.0** | **15** | **7.5** |

**Total Average Score: 6.9**

A passing score is Total Average Score between 4.50 andd 7.49.

**ATTACHMENT K:** Alignment of Portfolio Competencies to Oklahoma Standards

|  |  |
| --- | --- |
| **Competency** | **Alignment with Oklahoma Standards** |
| 1. Candidate understands the central concepts and methods of inquiry of the subject matter discipline(s) he or she teaches.  - number and operation  - algebra  - geometry  - calculus  - discrete mathematics  - statistics  -measurement | 9, 10, 11, 12, 13, 14, 15 |
| 2. Candidate understands how students learn and develop, and can provide learning opportunities that support their intellectual, social and physical development at all grade levels including early childhood, elementary, middle level and secondary. | 8 |
| 3. Candidate understands how students vary in their approaches to learning and creates instructional opportunities that are adaptable to individual differences of learners. | 8 |
| 4. Candidate understands curriculum integration processes and uses a variety of instructional strategies to encourage student's development of critical thinking, problem solving, and performance skills and effective use of technology. | 4, 8 |
| 5. Candidate uses best practices related to motivation and behavior to create learning environments that encourage positive social interaction, self-motivation and active engagement in learning, thus, providing opportunities for success | 7, 8 |
| 6. Candidate develops a knowledge of and uses communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. | 3, 7, 8 |
| 7. Candidate plans instruction based upon curriculum goals, knowledge of the teaching/learning process, subject matter, students' abilities and differences, and the community; and adapts instruction based upon assessment and reflection. | 8 |
| 8. Candidate understands and uses a variety of assessment strategies to evaluate and modify the teaching/learning process ensuring the continuous intellectual, social and physical development of the learner. | 8 |
| 9. Candidate evaluates the effects of his/her choice and actions on others and modifies those actions when needed, and actively seeks opportunities for continued professional growth. | 8 |
| 10. Candidate fosters positive interaction with school colleagues, parents/families, and organizations in the community to actively engage them in support of students' learning and well-being. | 8 |
| 11. Candidate shall have an understanding of the importance of assisting students with career awareness and the application of career concepts to the academic curriculum. | 8 |
| 12. Candidate understands the process of continuous lifelong learning, the concept of making learning enjoyable, and the need for a willingness to change when change leads to greater student learning and development. |  |
| 13. Candidate understand the legal aspects of teaching including the rights of students, parents/families, as well as the legal rights and responsibilities of Candidate. |  |
| 14. Candidate understands, and is able to develop instructional strategies/plans based on the OK core curriculum. | 8 |
| 15. Candidate understands the State teacher evaluation process, "Oklahoma Criteria for Effective Teaching Performance," and how to incorporate these criteria in designing instructional strategies. |  |
| 16. Candidate understands the Catholic Perspective in education. |  |
| 17. Candidate can relate principle and theories to actual practice, showing evidence of the reflective practitioner framework and the role of a life of balance. |  |

**ATTACHMENT L:** Portfolio Grading Rubric

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Competencies** | **Alignment with Oklahoma Standards** | **Target**  **(3)** | **Satisfactory**  **(2)** | **Needs**  **Improvement (1)** | **SCORE/**  **Comment** |
| 1. Knowedge of subject matter disciplines.  - number and operation  - algebra  - geometry  - calculus  - discrete mathematics  - statistics  -measurement | 9, 10, 11, 12, 13, 14, 15 | Artifacts show exceptional achievement in mathematics. Artifacts include:  -a paper from the history/philosophy of mathematics,  -the written part of a project from any calculus course,  -a test from a post-calculus course. | Artifact(s) demonstrate competency in the mathematical areas. | Artifact does not clearly demonstrate competency |  |
| 2. Knowledge of how students learn and develop | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 3. Knowledge of how students vary in their approaches to learning | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 4. Knowledge of curriculum integration processes | 4, 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 5. Uses practices to create learning positive learning environments | 7, 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 6. Knowledge of and uses communication techniques | 3, 7, 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 7. Plans instruction | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. Artifacts should include a unit plan that outlines the steps for teaching an appropriate concept in math. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 8. Candidate understands and uses a variety of assessments | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 9 Evaluates the effects of choice and actions. | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 10. Fosters positive interaction with school colleagues, etc | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 11Uunderstanding of career awareness | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 12. Lifelong learning. |  | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 13.Legal aspects. |  | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 14. OK core curriculum. | 8 | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 15. OK Criteria for Effective Teaching Performance, |  | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 16. Catholic Perspective in education. |  | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| 17 Life of balance. |  | Artifact(s) are original work, clearly demonstrate competency and exemplify effective teaching with variation in planning/teaching and reflecting. | Artifact(s) demonstrate competency and show ability to plan and teach effectively. | Artifact does not clearly demonstrate competency |  |
| Reflective and Critical Thinking |  | Excellent descriptions and analysis of artifacts, explanation of learning is associated with artifact and/or experience is clearly described. Theory is shown in applied practice. | Good descriptions and analyses. Explanation of relation between artifacts and competency with application of theory to practice shown. | Reflections show little analytical skill or application of theory to practice. |  |
| Appearance, organization, and fluency |  | Consistently neat, well organized with appropriate English used throughout | Neat and easy to follow with only minor deviations from standard English. | Messy, unorganized, with numerous grammatical, punctuation errors. |  |
| Total Points  Maximum=51 |  |  |  |  |  |

46-51=A, 40-45=B, 35-39=C, below 35= not passing  **\*A score of 1 on any item requires that the competency must be addressed again in the next checkpoint. The reviewer and teacher candidate will develop a Plan for Improvement for any unacceptable competencies.**

**SECTION V—USE OF ASSESSMENT RESULTS TO IMPROVE**

**CANDIDATE AND PROGRAM PERFORMANCE**

Evidence must be presented in this section that assessment results have been analyzed and have been or will be used to improve candidate performance and strengthen the program. This description should not link improvements to individual assessments but, rather, it should summarize principal findings from the evidence, the faculty’s interpretation of those findings, and changes made in (or planned for) the program as a result. Describe the steps program faculty has taken to use information from assessments for improvement of both candidate performance and the program. **This information should be organized around (1) content knowledge, (2) professional and pedagogical knowledge, skill, and dispositions, and (3) student learning.**

(response limited to 12000 characters)

Although we have not had any program completers over the past three years, the unit has made some adjustments to the program based on changes in administration, faculty, feedback from students in course evaluations, and recommendations from the Teacher Education Council.

Changes for all Education Majors (2009-2010):

* The Professional Education Mentoring course was eliminated and all clinical experiences are now linked to specific coursework. Secondary majors are required to complete a minimum of 75 hours and elementary majors are required to complete a minimum of 100 hours prior to student teaching.

Changes for all Education Majors (2010-2011):

* All education majors take PY4223 Tests and Measurement instead of ED 4132 Education Evaluation in order to enhance their practical understanding and application of issues, theory, and uses of educational evaluation and assessment; criteria, construction and evaluation of teacher-designed tests; and values and limitations of tests.
* During Foundations of Teaching (ED 3012), prospective teacher education candidates are given the practice test for the Oklahoma General Education Test (OGET). Passing this test is a requirement for admission to the Teacher Education Program. This change has proven to be a satisfactory way to screen students who will be unlikely to succeed in this program and advise them into other, more appropriate, programs of study. It is anticipated that this change will also improve the quality of content knowledge and skills for all teacher education candidates.

Changes for all Education Majors (2011-2012):

* Prior to this graduation requirement change, candidates were regarded as program completers (on Title II reports, etc) when they successfully completed all coursework and field experience requisites. However, some program completers would go directly into graduate school without taking the OSAT and/or OPTE or wait for an extended period of time before taking these certification exams. The wait was most often due to financial constraints. Nevertheless, this delay had a negative effect on the graduates’ test scores. The graduation requirement now states that candidates, in addition to completing all coursework and field experience conditions, must also pass all certification exams before they are conferred a degree and considered program completers. Those who do not meet the education program requirements may receive a degree in Liberal Arts, Social Sciences or whichever discipline is equivalent to the coursework they have completed.
* All student teachers are now required to keep a daily electronic journal of what they see and do, including specific behavioral and/or academic accomplishments or concerns. This journal will be emailed to the university supervisor each Friday by 6:00pm and the supervisor will respond to and return the journal by Sunday at 6:00pm. The journal will be included in the Education Portfolio and count as 25% of the grade in Student Teaching Seminar (ED 4322).
* Because the university faculty voted to eliminate Fundamentals of Leadership (SS 3213) from the Common Core requirements, exploring the teacher’s role as an educational leader and developing a *Leadership Project* will be included in ED 3002 Middle Level Education.
* It was determined by the Teacher Education Council that the dispositions of all candidates were not being evaluated systematically throughout the program. Therefore, an evaluation instrument was developed collaboratively by the TEC, faculty and students taking education coursework for this purpose.

Changes for Secondary Math Education Majors (2012-2013): The two courses MA 3523 Methods of Teaching Geometry and MA 3533 Methods of Teaching Algebra were combined into MA 3263 Methods of Teaching Secondary/Middle Level Math as a more effective use of students’ time in their compressed course schedules.

**Referring to SECTION III of this program review, on the basis of the assessment results for this one program completer in 2013, no changes to the program are indicated, since all results indicate he has met the standards.**

**SECTION VI—For Revised Reports or Response to Conditions Reports Only**

DOES NOT APPLY

**Addendum I**

**Major Learning Portfolio Stage II: \_\_\_\_\_\_\_\_\_\_\_\_\_ Major Reviewer Responses**

**Student Advisor and department Faculty review each student; a third Instructor will review if there are major differences in responses**

Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Advisor \_\_\_\_\_\_\_Reviewer 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Reviewer 2)\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Major Student Learning Outcomes**  Upon completion of the common core curriculum, the student will be able to: | Artifact is acceptable;  Reflection shows correlation between artifact & outcome.  0-1-2-3 *comments helpful* | Reflection demonstrates achievement of outcome 0-1-2-3 *comments helpful* | Reflection is well thought out, organized, grammatically correct  0-1-2-3 *comments helpful* | **TOTAL** |
| MLO #1: Demonstrate and apply the central concepts and methods of inquiry of the subject matter discipline(s) that I teach. |  |  |  |  |
| MLO #2: Identify how students learn and develop and how they vary in their approaches to learning. |  |  |  |  |
| MLO# 3: Devise and design learning experiences that make subject matter meaningful to students and support students’ intellectual, social, and physical development. |  |  |  |  |
| MLO#4: Compare and contrast the curriculum integration process with other approaches to teaching and use a variety of instructional strategies to encourage students’ development of critical thinking, problem solving, and performance skills. |  |  |  |  |
| MLO#5: Identify, synthesize, and apply best practices related to motivation and behavior for the purpose of creating learning environments that encourage positive social interaction, self-motivating behavior, and active engagement in learning. |  |  |  |  |
| MLO#6. Demonstrate a knowledge of and use of communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. |  |  |  |  |
| MLO#7: Mastery of effective technology application. |  |  |  |  |
| MLO#8: Devise and design instruction based upon the Oklahoma core curriculum, knowledge of the teaching/learning process, subject matter, students’ abilities and differences, and the community. |  |  |  |  |
| MLO#9: Comprehend, design, and apply a variety of assessment strategies to evaluate and modify the teaching/learning process ensuring adaptation of instruction based upon assessment and reflection. |  |  |  |  |
| MLO#10: Evaluate the effects of choices and actions on others, modifying those actions when needed, and actively seeking opportunities for continued professional growth. |  |  |  |  |
| MLO#11: Relate positively with school colleagues, parents/families, and organizations in the community and actively engage them in support of students' learning and well-being. |  |  |  |  |
| MLO#12. Comprehend the importance of assisting students with career awareness and apply career concepts to the academic curriculum. |  |  |  |  |
| MLO#13 Comprehend the process of continuous lifelong learning, the concept of making learning enjoyable, and modify instruction when change leads to greater student learning and development. |  |  |  |  |
| MLO#14: Interpret the legal aspects of teaching including the rights of students, parents/families, as well as the legal rights and responsibilities of the teacher. |  |  |  |  |
| MLO#15: Describe the Catholic Perspective in education and relate principle and theories to actual practice, demonstrating the reflective practitioner framework and a life of balance. |  |  |  |  |

**Addendum II**

**Portfolio Evaluation Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Learning Outcomes** | 3- Pass With Distinction | 2- Pass | 1- Pass with Reservations | 0- No Pass |
| MLO #1: Demonstrate and apply the central concepts and methods of inquiry of the subject matter discipline(s) that I teach. | Demonstrates understanding of all NCSS and state standards and reflection shows achievement of outcome | Demonstrates understanding of most NCSS and state standards -reflection shows correlation between artifact and outcome | Demonstrates understanding of some NCSS and state standards reflection shows some achievement of or alignment to outcome | No demonstration understanding of NCSS/state standards Poor reflective correlation between artifact and outcome, does not show achievement of outcome |
| MLO #2: Identify how students learn and develop and how they vary in their approaches to learning. | Demonstrates understanding and practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates understanding of outcome reflection shows correlation between artifact and outcome | Demonstrates little under -standing and/or practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate understanding or practice- reflection shows no achievement of or alignment to outcome |
| MLO# 3: Devise and design learning experiences that make subject matter meaningful to students and support students’ intellectual, social, and physical development. | Addresses all components of outcome- reflection exhibits clear achievement of and alignment to outcome | Addresses most components of outcome- reflection shows correlation between artifact and outcome | Addresses few components of outcome- reflection shows some achievement of or alignment to outcome | Addresses all components of outcome- reflection shows no achievement of or alignment to outcome |
| MLO#4: Compare and contrast the curriculum integration process with other approaches to teaching and use a variety of instructional strategies to encourage students’ development of critical thinking, problem solving, and performance skills. | Demonstrates understanding and practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates understanding of outcome reflection shows correlation between artifact and outcome | Demonstrates little under -standing and/or practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate understanding or practice- reflection shows no achievement of or alignment to outcome |
| MLO#5: Identify, synthesize, and apply best practices related to motivation and behavior for the purpose of creating learning environments that encourage positive social interaction, self-motivating behavior, and active engagement in learning. | Demonstrates understanding and practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates understanding of outcome reflection shows correlation between artifact and outcome | Demonstrates little under -standing and/or practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate understanding or practice- reflection shows no achievement of or alignment to outcome |
| MLO#6. Demonstrate a knowledge of and use of communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. | Demonstrates knowledge and practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates knowledge of outcome reflection shows correlation between artifact and outcome | Demonstrates little knowledge and/or practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate knowledge or practice- reflection shows no achievement of or alignment to outcome |
| MLO#7: Mastery of effective technology application. | Clearly demonstrates practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates practice- reflection shows correlation between artifact and outcome | Poor demonstration of practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate practice- reflection shows no achievement of or alignment to outcome |
| MLO#8: Devise and design instruction based upon the Oklahoma core curriculum, knowledge of the teaching/learning process, subject matter, students’ abilities and differences, and the community. | Demonstrates planning of all components- reflection exhibits clear achievement of and alignment to outcome | Demonstrates planning of most components- reflection shows correlation between artifact and outcome | Demonstrates planning with few components- reflection shows some achievement of or alignment to outcome | Does not demonstrate planning of components- reflection exhibits no achievement of or alignment to outcome |
| MLO#9: Comprehend, design, and apply a variety of assessment strategies to evaluate and modify the teaching/learning process ensuring adaptation of instruction based upon assessment and reflection. | Demonstrates knowledge and practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates knowledge of outcome reflection shows correlation between artifact and outcome | Demonstrates little knowledge and/or practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate knowledge or practice- reflection shows no achievement of or alignment to outcome |
| MLO#10: Evaluate the effects of choices and actions on others, modifying those actions when needed, and actively seeking opportunities for continued professional growth. | Clearly demonstrates practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates practice- reflection shows correlation between artifact and outcome | Poor demonstration of practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate practice- reflection shows no achievement of or alignment to outcome |
| MLO#11: Relate positively with school colleagues, parents/families, and organizations in the community and actively engage them in support of students' learning and well-being. | Clearly demonstrates practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates practice- reflection shows correlation between artifact and outcome | Poor demonstration of practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate practice- reflection shows no achievement of or alignment to outcome |
| MLO#12. Comprehend the importance of assisting students with career awareness and apply career concepts to the academic curriculum. | Demonstrates knowledge and practice- reflection exhibits clear achievement of and alignment to outcome | Demonstrates knowledge of outcome reflection shows correlation between artifact and outcome | Demonstrates little knowledge and/or practice- reflection shows some achievement of or alignment to outcome | Does not demonstrate knowledge or practice- reflection shows no achievement of or alignment to outcome |
| MLO#13 Comprehend the process of continuous lifelong learning, the concept of making learning enjoyable, and modify instruction when change leads to greater student learning and development. | Demonstrates knowledge of process and reflection shows clear achieve ment of and alignment to outcome | Demonstrates knowledge of process reflection shows correlation between artifact and outcome | Demonstrates little knowledge - reflection shows some achievement of or alignment to outcome | Does not demonstrate knowledge reflection shows no achievement of or alignment to outcome |
| MLO#14: . Interpret the legal aspects of teaching including the rights of students, parents/families, as well as the legal rights and responsibilities of the teacher. | Clearly demonstrates knowledge of apects- reflection exhibits clear achievement of and alignment to outcome | Demonstrates knowledge of most aspects- reflection shows correlation between artifact and outcome | Demonstration of knowledge of some aspects- reflection shows some achievement of or alignment to outcome | Does not demonstrate knowledge- reflection shows no achievement of or alignment to outcome |
| MLO#15: Describe the Catholic Perspective in education and relate principle and theories to actual practice, demonstrating the reflective practitioner framework and a life of balance. | Demonstrates knowledge and application- reflection exhibits clear achievement of and alignment to outcome | Demonstrates knowledge of outcome -reflection shows correlation between artifact and outcome | Demonstrates little knowledge and/or application- reflection shows some achievement of or alignment to outcome | Does not demonstrate knowledge or practice- reflection shows no achievement of or alignment to outcome |
| Appearance , Organization,  Appropriate English, etc. of Portfolio | Appropriate English is used throughout the portfolio.  Artifacts are clearly original works by the author. Portfolio is consistently near, well organized, and easy to follow. | Only minor deviations from standard English appear in the portfolio.  Few artifacts are duplicated from other's work. Portfolio is neat and easy to follow. It is generally well organized. | There are some deviations from standard English in the portfolio.  Many artifacts are duplicates of the work of others.  Portfolio is somewhat unorganized and occasionally difficult to follow. | There are numerous errors throughout the portfolio.  Artifacts often duplicate the work of others.  Portfolio is messy, unorganized, and difficult to follow. |