

**College of Education Handbook  
For Field Experience  
Mathematics Secondary Education**



**TEACHER EDUCATION PROGRAM  
NORTH GREENVILLE UNIVERSITY**

**Fall 2019**

## Welcome

Welcome to the world of field experiences in secondary education. The idea behind field experiences is to provide opportunities for you to apply your knowledge, skills, and dispositions as you work with diverse learners in a variety of settings. As you progress from one field experience to another, you will begin to understand the varied and complex aspects of teaching. Designed to be both incremental and well-sequenced, field experiences help you to develop the competence necessary to begin your career as a teacher.

This component of field experiences is characterized by collaboration, educational environments with most appropriate practice associated with sound professional expertise, and candidate's accountability through distinct and numerous assessments. Field experiences represent a variety of early and ongoing school-based opportunities in which candidates observe, reflect, assist, tutor, manage, instruct, and assess in public school classrooms.

The over-arching focus of all field experiences is the same throughout the Teacher Education Program, to give candidates authentic experiences within an environment of growth. Candidates are mentored to become effective practitioners, caring leaders, and lifelong learners collaboratively by University mentors and classroom teachers.

On the next few pages, you will see the letter the cooperating teacher receives when she agrees to take one of our teacher candidates and a copy of the evaluation forms that will be used by the University mentor and the cooperating teacher to give you feedback on lessons that you teach. These documents and all of the other information in this handbook are designed to give you the best experience possible and to help you become an effective practitioner, a lifelong learner, and a caring leader.

## **Introduction to Field Experiences**

At each level of the pre-service education experience at North Greenville University, teacher candidates are given opportunities to apply the knowledge and skills they are obtaining through simulated and actual classroom situations. Field experiences are offered in cooperating schools as an integral component of the program. Field experiences provide the opportunity for candidates to continue to develop their knowledge, skills, and dispositions in the real world of classrooms as they work with diverse learners in a variety of settings appropriate to the content and level of their program of study.

Field experiences and clinical practice are characterized by collaboration, appropriate practice associated with sound professional expertise, and accountability through extensive assessment. Field experiences represent a variety of early and ongoing school-based opportunities in which candidates observe, reflect, assist, tutor, manage, instruct, and assess learning in K-12 classrooms.

The first field experience, as a part of EDUC 1210 Introduction to Education, occurs as your first education class and is exploratory and primarily observational in nature. After candidates are admitted to the program, each major has its own organization for field experiences. The over-arching focus, however, is the same throughout the Division, to give candidates authentic learning experiences within an environment of on-going growth. This is accomplished through mentoring by university supervisors and classroom teachers. Candidates are mentored to become effective practitioners, caring leaders, and lifelong learners collaboratively by university mentors and classroom teachers. Students move from observing both the teacher and the learner to engaging in teaching lessons, to curriculum planning and development. Field experiences are integrated into and tied to specific courses and represent a variety of early and on-going school-based opportunities in which candidates observe, reflect, assist, tutor, manage, instruct, assess, and conduct events in their classrooms.

## **Responsibilities for Individuals**

## **Involved with Field Experience**

### **North Greenville Instructor**

- ❖ Communicate expectations to candidates
- ❖ Grade lesson plans and reflections
- ❖ Communicate with University Supervisors as needed

### **North Greenville University Supervisors**

- ❖ Communicate expectations to Cooperating Teachers
- ❖ Complete formal observations on each candidate
- ❖ Conduct a post-conference with each candidate after an observation
- ❖ Complete evaluation forms for each candidate and provide the candidate with copies
- ❖ Collect Cooperating Teacher evaluation forms and Assessment of Dispositions form
- ❖ Provide candidates with copies of evaluation forms
- ❖ Turn in original evaluation forms to Placement Coordinator at the end of the semester
- ❖ Be available to candidates, be a resource, and be a coach

### **Cooperating Teachers**

- ❖ Assist candidate in the scheduling of the lessons to be taught
- ❖ Assist candidate in the planning of the lessons (communicate standards currently being taught in the classroom and provide any materials you wish for him/her to use)
- ❖ Be present during each of the lessons and complete an evaluation form
- ❖ Complete a summative evaluation form at the end of the field experience
- ❖ Complete an Assessment of Dispositions form at the end of the field experience
- ❖ Give all forms to the North Greenville University Mentor/Supervisor or place in the designated area at your school for North Greenville Placement Coordinator

### **North Greenville Teacher Candidates**

- ❖ Communicate with Cooperating Teacher and follow his/her schedule and guidelines in planning and scheduling lessons (You are responsible for the scheduling of the lessons you will be teaching.)
- ❖ Meet with North Greenville University Mentor/Supervisor after formal observations or as needed
- ❖ Provide copies of each lesson plan to the Cooperating Teacher, North Greenville University Mentor/Supervisor, and North Greenville University Instructor
- ❖ Communicate by phone or email with the North Greenville University Mentor, at least 48 hours in advance, with the time for when you will be teaching a lesson



TEACHER EDUCATION PROGRAM  
NORTH GREENVILLE UNIVERSITY

Dear Student,

I hope you enjoy your field experience this semester. You will learn from your observations and participation in the public school classroom. Principals and their staff support North Greenville University’s College of Education Program by allowing us into their classrooms. Your attendance and behavior is reflective of the university and can influence future placements at your school.

While you are attending the school where you have been placed, you are expected to:

- be on time each day and stay for the entire appointed time; do not leave early
- wear your name tag and sign in and out at the front office of the school
- contact the school if you are going to be absent
- call or email your teacher and let them know as soon as possible if you are going to be absent
- contact the teacher and agree upon a day that you can visit and make up the day that you missed

I have read and understand the field experience attendance requirements.

\_\_\_\_\_ Date \_\_\_\_\_  
Student Name - Print

\_\_\_\_\_  
Student Signature

LaVelle McCray  
Field Placement Coordinator  
College of Education  
North Greenville University

Andrew S. Hodges  
Secondary Field Placement Coordinator  
College of Education  
North Greenville University

**The purpose of the Mathematics Secondary Education Track program at North Greenville University is to offer a distinctive, innovative program that attracts and meets the needs of students as well as the community. The specific purpose of the mathematics program is to prepare candidates to be effective practitioners, caring leaders, and lifelong learners.**

In continuing the university's Statement of Purpose, this program enables students to integrate academic discipline, Christian lifestyle, and an enriched cultural experience by offering course work that prepares students to work in the field of education. This program will prepare students to teach mathematics in high schools throughout South Carolina and beyond, thereby adding a significant avenue for employment and service to the state.

To accomplish these goals, the Department of Mathematics has established the following immediate learning outcomes:

- 1) To provide students with a knowledge of fundamental mathematical concepts, relationships, and processes to prepare them to teach in Secondary Education
- 2) To provide students with a basic foundation in mathematical problem-solving, knowledge of reasoning and proof, communicating mathematically, making mathematical connections, understanding mathematical representations, and utilizing technology.
- 3) To train students in the use of the reasoning and proof and varied approaches to problem-solving
- 4) To develop students' skills in the use of technology
- 5) To develop students' skills in the communicating mathematically
- 6) To challenge students to think critically and apply analytical reasoning to investigate and communicate mathematically
- 7) To train the students to relate to high school students and teach them to think critically when solving real-world problems using mathematical structures and processes
- 8) To develop the technological and informational skills necessary to problem-solve and communicate successfully in an electronic age
- 9) To develop an awareness of the ways to make connections in mathematics to facilitate learning in secondary students.
- 10) To develop an appreciation for mathematics and to lead high school students to explore jobs in the field of mathematics.

### **The Mission and Goals of the Mathematics Program for Secondary Education**

Program Mission: To graduate students proficient in the field of mathematics who can communicate in such a way that they can teach others key concepts and underlying principles of mathematics.

Program Goal: To graduate candidates proficient in the fields of mathematics who can effectively facilitate learning in high school students.

### **The Conceptual Framework of the College of Education**

The Mathematics Secondary Education program at North Greenville University will align with the Conceptual Framework of the College of Education that was approved by CAEP in 2005. This framework consists of the mission, vision, aim, philosophy, purposes, and goals as reflected in outcomes and candidate proficiencies for candidate performance, a statement of commitment to diversity and technology, and a system for assessing performance. The framework grows out of the purpose and objectives of the University as a whole.

#### **Vision**

The College of Education prepares teachers who have not only deep understanding of content and methods of teaching, but also a deep understanding of students; who not only facilitate students' learning, but also promote students' holistic wellbeing; who desire not only to see others continually grow and develop, but who also continue to grow as professionals themselves. We envision our graduates teaching effectively, leading through example, and continually learning the art and science of the teaching profession.

#### **Mission**

The self-examination process required in the development of our Conceptual Framework has led to an insightful discovery of who we are as the College of Education at North Greenville University. We are the link between the past, present, and future. The Teacher Education Program, first approved in 1997, has grown at an astonishing rate. In ten years, we have graduated 398 Elementary, Early Childhood, and Music Education majors. This rapid growth parallels the growth of the institution as a four-year university and highlights the need for expanded programs.

Building on its belief that education can and must provide light in the darkness, we now have a teacher education program that trains teachers not only for this geographic area, but also for other states and foreign countries. As the present link in the fulfillment of this mission, NGU prepares students to respond to God's vocational calling for their lives. The College of Education, together with university and community stakeholders, conceived and designed a teacher education program that prepares teachers who experience a sense of calling to the profession to become effective practitioners, caring leaders, and lifelong learners. We urge our graduates to remember the heritage of this institution and to go forward with resolve and courage. We challenge them, just as Paul, in Philippians 3:14 (NIV) to press on toward the goal to claim the prize for which God has called them.

Building on a heritage of teachers who modeled behaviors indicative of high expectations, the faculty in the College of Education continue to demonstrate for students the knowledge, skills, and dispositions that empower them to go forward with resolve and courage as teacher education graduates of a school "of high grade equal to any in the country" (Howard, 1967, p. 5).

The NGU Teacher Education Handbook outlines the College of Education's present degree program requirements and contains all pertinent documents used to evaluate candidates and to assess their progress. A brief introduction to the present College of Education's Mission and Purpose follows.

*IN ALIGNMENT WITH THE PURPOSE AND MISSION OF NORTH GREENVILLE UNIVERSITY, THE MISSION OF THE COLLEGE OF EDUCATION IS TO DEVELOP TEACHERS WHO POSSESS KNOWLEDGE, SKILLS, AND DISPOSITIONS THAT EMPOWER THEM TO FOSTER LEARNING IN ALL STUDENTS.*

### **Aim**

**The teacher education program at North Greenville University, a Christ-centered institution, prepares teacher candidates to become effective practitioners, caring leaders, and lifelong learners in a diverse, changing society.**

### **Philosophy**

Our beliefs about how best to prepare teacher candidates to become effective, reflective, and facilitative practitioners rest, first of all, on the Bible as the solid foundation for a philosophy of education and of life, in keeping with the Christian commitment of North Greenville University. Other knowledge bases that provide direction to our efforts include educational theory and research, the wisdom of practice, and state and national policy directives.

Academic research and the American public agree that teacher quality is the most important factor in education, which drives student performance (Milken, 2000). Studies reported by Marzano (2003) confirm the profound impact a teacher can have on individual student achievement, noting a positive relationship between teachers' content and pedagogical knowledge and student achievement. The link between social support, academic learning and student achievement suggests that teachers must not only provide the instruction necessary to meet high expectations, but must also provide a sense of trust, confidence, and psychological safety that allows students to learn. The findings of Lee, Smith, Perry, and Smylie (1999) suggest that gains in student achievement require both high academic expectations and the social support necessary for students to achieve.

Teachers are decision-makers and problem-solvers working in a very complex environment with multiple, simultaneous demands on their time and attention. Mere mindless application of techniques based on research and learned by rote is not sufficient to solve the problems of teaching; prospective teachers must learn to practice reflectively (Schön, 1987). Teachers who conceive of and conduct themselves as learners provide a model for students and are better able to help students succeed as learners (Sternberg, 1987). Ongoing professional growth is a hallmark of quality in teaching.

High quality in teaching is also a function of caring; school relationships characterized by caring promote growth among teachers as well as students (Noddings, 1992). As Palmer (1998) described it, good teaching cannot be reduced to technique; it comes from the identity and integrity of the teacher. Good teachers' methods vary widely, but they consistently create connections among the teacher, the students, and the subject; they build a community. Sergiovanni (1992) spoke of schools becoming "virtuous enterprises;" Chaskin and Rauner (1995) urged us to search for ways to build caring into the environments in which young people develop. Teachers who care for and serve the best interests of their students are fulfilling a spiritual principle (Philippians 2:4); they are demonstrating love and exercising Biblical servant-leadership.

In addition to valued research on quality in teaching, students can provide insightful and articulate observations on excellence in teaching. During pre-registration days for fall 2003, the entering freshmen at North Greenville University were required to write an essay for freshman English placement based on one of two writing prompts: "Describe an excellent student." or "Describe an excellent teacher." A College of Education faculty member analyzed 145 essays describing the qualities of an excellent teacher. Not surprisingly, students focused on those qualities and characteristics correlating to our philosophy, and ultimately, our outcomes that define excellence in teaching. Students identified a caring, compassionate, selfless, and sacrificial teacher who "goes the extra mile" by staying late, being available, knowing students' needs, and expressing a willingness to help. Students also identified knowledge of the subject, a demonstration of a variety of teaching and classroom management skills, personal traits of fairness, loyalty, and honesty, and a commitment to lifelong learning as characteristics of the excellent teacher. Finally, students identified recognition of individual differences reflected in proficiencies such as providing different learning activities for different types of students, answering and assisting all students, and adapting to differences in learning and teaching styles.

### **Diversity / Multicultural Education**

Additionally, a fundamental area that must permeate all educational programs is multicultural education. Teacher candidates must be prepared for an environment requiring diverse and complex human responses, both cognitively and affectively. The cultural fusion into a melting pot of cultures is no longer the reality; rather, it is a mosaic of many colors and forms, each piece of which retains its uniqueness. In contrast, the racial and ethnic composition of American teachers continues to be primarily white female (Chisholm, 1994, p.3). As reflective practitioners, teacher candidates must develop an awareness of their own cultural perspective. Teacher candidates must also develop a cultural competence to function comfortably in a culture different from their own. Teacher candidates must develop and appreciate all aspects of culturally diverse groups, including their values, stories, art, music, religions, and learning styles. They must recognize the close links of cultural roots and cognition in order to adapt with appropriate teaching styles (Boykin, 2000). Recognizing also the importance of preparation of teacher candidates for a broader societal scope, we collaborate with those state and national program directives that articulate standards to develop a common core of knowledge and skills to be acquired by all new teachers.

### **Commitment to Diversity**

Futrell, Gomez, and Bedden (2003) described America as one of the most diverse nations in the world. We are truly a mix of cultures, races, abilities, and talents. According to Futrell et al. (2003), 35% of American elementary and secondary school children are from racial or ethnic minority groups. Today, approximately 25% of school-age children live in poverty, and 33% are of limited English proficiency. Recognizing the changing racial and cultural demographics in the areas it serves, the faculty of the Teacher Education Program are committed to preparing teacher candidates to appreciate, respect, celebrate, and plan appropriately for the racial, cultural, and developmental diversity of the children they teach. Knowing that good teaching is what matters most, the Education faculty, through a variety of means, seek to nurture and enhance each teacher candidate's personal qualities of flexibility, tolerance, and empathy for others.

Committed to fostering dispositions that emphasize caring in the classroom, the Teacher Education Program prepares candidates to appreciate, respect, and value the uniqueness of all children. Candidates learn to plan appropriately for all students, taking into account differences in ability, ethnicity, cultural background, developmental obstacles, and socio-economic status. The Teacher Education faculty, through presenting relevant literature, describing and modeling dispositions that incorporate caring attitudes, and encouraging candidates, seek to develop the dispositions that will enable candidates to meet the learning needs of all children.

Multicultural sensitivity is directly addressed in the Teacher Education Program at North Greenville University by a variety of means, including required coursework in world religion and a practicum component that provides interaction

with groups of diverse ethnic and cultural backgrounds. Enrichment experiences through service in a spectrum of multicultural environments are also available to all students through required participation in the Global Education Day. The ethos of the college motivates students, faculty, and staff to care for all persons because of the belief that God has created and loves every person individually.

#### **ADEPT4.0**

The Interstate New Teacher Assessment and Support Consortium (INTASC), a program of the Council of Chief State School Officers, has developed standards based upon shared views within the profession of what constitutes professional teaching. In addition, the South Carolina Department of Education has articulated performance dimensions and domains as a component of the System of Assisting, Developing and Evaluating Professional Teaching (ADEPT 4.0). These expectations are based on a large repertoire of knowledge and skills that provide the foundation for competent practice (SCTeachers.org) and are required in all South Carolina teacher education programs for teacher evaluation and improvement.

The College of Education recognizes that learner-centered, experiential, collaborative and reflective approaches to instruction promote deep, powerful, meaningful learning, both in teacher education and K-12 schooling (e.g., Darling-Hammond, 1997; Gardner, 1999; Zemelman, Daniels & Hyde, 1998). We find ourselves on a trajectory of growth toward deeper understanding, more effective practice, and an enhanced capacity to facilitate such learning with our teacher candidates.

Based ultimately on a spiritual foundation, the program prepares candidates according to these principles:

- Candidates prepare to become caring, committed practitioners through a logical, coherent, knowledge-based program which allows them to develop their abilities through guided experience in the field.
- The program is aligned with professional (INTASC) and state (ADEPT4.0) standards and policies.
- Desired outcomes for candidates are clearly articulated and constitute the objectives for each course and learning experience conducted within the program.

Candidates who meet these objectives for knowledge, skills, and dispositions, articulated as proficiencies, will be competent in subject matter knowledge, as well as be able to facilitate learning and to nurture the self-concept and self-efficacy of all learners. They will also be able to serve schools as caring leaders and be practicing members of the “club of life long learners” (Smith, 1983). Studies reported by Marzano (2003) confirm the profound impact a teacher can have on individual student achievement, noting a positive relationship between teachers’ content and pedagogical knowledge and student achievement suggests that teachers must not only provide the instruction necessary to meet high expectations, but must also provide a sense of trust, confidence, and psychological safety that allows students to learn. The findings of Lee, Smith, Perry, and Smylie (1999) suggest that gains in student achievement require both high academic expectations and the social support necessary for students to achieve.

The College of Education meets all of the state standards and requirements, including preparing lessons that are based on the SC State Content Standards for grades 9-12 Mathematics, implementing the EEDA and the SC Safe Schools Act. Candidates in Mathematics Education will utilize the SC State Standards in lesson planning and implementation, include contextual teaching, relate content to careers, and ensure that high school students are not harassed or bullied in any way.

Candidates are thoroughly engaged in the National Council of the Teachers of Mathematics (NCTM 2012) standards. Candidates prepare multiple assessments throughout their program such as lesson planning, utilizing student demographic data in planning, unit planning, assessing and analyzing assessments, and preparing a final notebook based on the NCTM standards..

#### **Supportive and Complimentary Relationships**

The relationship of the expanded Secondary Education programs at NGU complements and supports the present degree programs in Mathematics and Education. The School of Science and Math collaborates with the College of Education in the offering of secondary education components to the existing B.S. in the Mathematics Program. The University recognizes the need to offer more programs and preparation for employment for the ever-growing student population. Additionally, the secondary education component opens new avenues to participate in the larger community by sending our students out into local schools to observe and assist faculty in local schools with the ultimate goal of providing highly qualified teachers to join the ranks of faculty at high schools throughout South Carolina. Although the majority of colleges



and universities in South Carolina offer secondary degrees in the proposed major of mathematics, the number of graduates from these institutions has not kept pace with the demand for highly qualified teachers for the state. The proposed expanded Secondary Education program at NGU compliments other institutions in their efforts to meet the demand for highly qualified secondary teachers in mathematics.

Faculty and candidates are urged to be members of professional organizations such as the National Council of the Teachers of Mathematics (NCTM). Mathematics majors with a 3.5 GPA may become members of an active chapter of *Beta Delta*, an honorary educational society. Additionally, candidates can participate in the Mathematics' club, the Teacher Education Association, and other organizations beyond campus. Candidates are encouraged to grow professionally through active participation in professional organizations.

**Assessments Alignment to NCTM 2012 Standards**

Standards									
1a	Praxis II	Course grades		Notebook (History)					
2a				Notebook				Seminar Presentation	
2b			FEE	Notebook					
2c			FEE	Notebook					
2d				Notebook	Addendum				AOD
2e				Notebook	Addendum				
2f				Notebook	Addendum				
3a	Lesson plan	Unit plan	FEE	Notebook		ADEPT4.0	CFUP/A	Seminar Presentation	
3b				Notebook		ADEPT4.0	CFUP/A		
3c	Lesson plan	Unit plan	FEE	Notebook	Addendum	ADEPT4.0		Seminar Presentation	
3d	Lesson plan	Unit plan	FEE	Notebook	Addendum			Seminar Presentation	AOD
3e	Lesson plan	Unit Plan	FEE	Notebook				Seminar Presentation	AOD
3f	Lesson plan	Unit Plan		Notebook		ADEPT4.0	CFUP/A	Seminar Presentation	
3g	Lesson plan			Notebook		ADEPT4.0	CFUP/A		
4a				Notebook					AOD
4b		Unit plan		Notebook		ADEPT4.0	CFUP/A		
4c				Notebook		ADEPT4.0		Seminar Presentation	AOD
4d			FEE	Notebook		ADEPT4.0		Seminar Presentation	AOD
4e		Unit plan	FEE	Notebook	Addendum				AOD
5a	Lesson plan		FEE	Notebook	Addendum			Seminar Presentation	
5b			FEE	Notebook	Addendum			Seminar Presentation	AOD
5c	Lesson plan			Notebook	Addendum		CFUP/A		
6a	Mock Interv	Resume		Notebook				Seminar Presentation	AOD
6b	Mock Interv			Notebook		ADEPT4.0		Seminar Presentation	AOD
6c		Resume		Notebook					

## Course Requirements of the Current Mathematics Major

The B.S. in Mathematics requires that students earn at least 128 hours (132/134 including chapel credit). For the Education Track, students must complete the general education requirements of 31/33 hours. They must also complete 57 hours in required mathematics courses including 5 hours of Math Education courses, 8 hours of Physics, and 3 hours of electives in mathematics. The Education component includes 36 hours of education and 3 hours of general electives.

- 1) Maintain a 2.5 or better average in mathematics courses;
- 2) greater than a 2.75 overall GPA; and
- 3) pass the seminar course with a “C” or better

## **Program Description**

### Course Requirements of the Mathematics: Secondary Education Track Degree

In comparison with the B.S. mathematics degree, the Mathematics Secondary Education Track Degree will follow the same basic requirements; however, students will take the following course substitutions.

B.S. Mathematics Degree	B.S Mathematics Secondary Education Track
General Education: Computer Science 1305 CHST 1310/1320, 2335 (6 hours) BIOL 1410 and one other physical science Physics 21410 and Physics 21420 Social Science (3 hours)	EDUC 1215 Integration Technology CHST 2335 is required BIOL 1410 Physics 1410 and Physics 1420 PSYC 2385 Adolescent Psychology
Mathematics Courses: All courses are the same except Senior Seminar (3 hours) CSCI 2325, MATH 3330, MATH 4320, & MATH 4325	Mathematics Courses: All courses are the same except Candidates take Abstract Algebra (MATH 33. Teacher Ssistant courses 2 hours of credit) MATH 3150 Technology for the Math Classroom (1 Credit hour) Candidates choose between Differential Equations, Numerical Analysis, Real Analysis, or Special Topics in Mathematics for their math elective. MAED 4310 Math Methods (3 hours), MAED 4210 Seminar in Curriculum and Instruction (2 hours)
Electives: Choose from any related minor	Education Track Courses: 33 hours EDUC 1210, 2230, 3300, 3350, 3410, 4340 EDSE 3290, 3395 EDSE 4800 and field experiences (100 hours)
Elective hours	Electives (3 hours)

Students planning to follow a Secondary Education program at North Greenville University must meet the admission requirement of the mathematics degree listed above, as well as the requirements of the Teacher Licensure Program. The standards of admission to the Teacher Licensure Program are inclusive of those for admission to North Greenville University and include other criteria outlined by the College of Education.

**It must be understood that admission to NGU is not synonymous with admission to the Secondary Education Teacher Licensure Program.**

MAED is the designation for Mathematics Education which corresponds with ENED for English and MUED for Music.

**BACHELOR OF SCIENCE IN MATHEMATICS: SECONDARY EDUCATION TRACK  
SUGGESTED COURSE SEQUENCE FALL 2018**

**PREPARED FOR:        ON        BY** .

*This form is for advising purposes only and is not a transcript of the student's academic credit at North Greenville University. Every semester the student should verify that the content on this form is correct and notify his/her advisor of any errors.*

**FRESHMEN**

1 <sup>ST</sup> Semester		2 <sup>ND</sup> Semester	
CHPL 1000 Chapel	0.5	CHPL 1000 Chapel	0.5
CEVT 1000 Cultural Events		CEVT 1000 Cultural Events	
ENGL 1310 Comp and Rhetoric	3.0	ENGL 1320 Comp and Literature	3.0
MATH 1410 Calculus I	4.0	MATH 2410 Calculus II	4.0
EDUC 1210 Intro. to Education	2.0	BIOL 1410 Principles of Biology I	4.0
HIST xxxx Western Civ. or Higher	3.0	EDUC 2230 Found of Education	2.0
CHST 13 0 Testament Survey	3.0	COMM 2300 Oral communications	3.0
COLL 1100/HNRS 1210 1 <sup>st</sup> Yr Exper	<u>1(2)</u>	PHED 1200 Physical Fitness/Wellness	<u>2.0</u>
	16.5(17.5)		18.5

**SOPHOMORE**

1 <sup>ST</sup> Semester		2 <sup>ND</sup> Semester	
CHPL 1000 Chapel	0.5	CHPL 1000 Chapel	0.5
CEVT 1000 Cultural Events		CEVT 1000 Cultural Events	
EDUC 3410 Educational Psyc	4.0	PSYC 2385 Adolescent Psychology	3.0
PHYS 1410 Physics I	4.0	PHYS 1420 Physics II	4.0
MATH 2420 Calculus III	4.0	MATH 3410 Stats Science/Engineer	4.0
EDUC 1215 Integration Technology	2.0	MATH 2310 Found. of Higher Math	3.0
MATH 3310 Linear Algebra	<u>3.0</u>	EDUC 2300 Foundations of Reading	<u>3.0</u>
	17.5		17.5

**JUNIOR**

1 <sup>ST</sup> Semester		2 <sup>ND</sup> Semester	
CHPL 1000 Chapel	0.5	CHPL 1000 Chapel	0.5
MATH 4345 Mathematical Stats	3.0	MATH xxxx MATH ELECTIVE	3.0
EDUC 3350 The Exceptional Learner	3.0	MATH 3150 Math Ed. Tech Seminar	1.0
*EDSE 4340 Classroom Mgmt.	3.0	MATH 3200 Math Teacher Asst.^	2.0
*EDSE 3290 Curriculum Develop <sup>##</sup>	2.0	MATH 3390 History of Faith and Math	3.0
CHST 2335 World Religions	3.0	MATH 4470 Discrete Modeling	4.0
MATH 3320 Abstract Algebra	<u>3.0</u>	*EDSE 3395 Read/Writing in the content <sup>##</sup>	<u>3.0</u>
	17.5		16.5

**SENIOR**

1 <sup>ST</sup> Semester		2 <sup>ND</sup> Semester	
CHPL 1000 Chapel	0.5	CHPL 1000 Chapel	0.5
MATH 3350 Found of Geometry	3.0	EDSE 4600 Directed Student Teaching	<u>12.0</u>
Art, Music, Theater Apprec.	3.0		12.5
*MAED 4310 Math Methods <sup>###</sup>	3.0	General Education Requirements: 38/40 hours	
Elective ELECTIVE & HOURS	3.0	Mathematics Major: 50 hours (includes 3 math elective hours)	

\*MAED 4210 Seminar Curriculum    2.0    Education track: 33 hours;  
14.5    General elective: 6 hours (127-129 hours)

\*Requires admission to the Teacher Education Program for Secondary Education.

^Students must take two credit hours of the Mathematics TA course. These two hours can be spread out over two semesters.

Field Experience in EDUC 1210, EDUC 3410, EDUC 3395, MAED 4310, EDUC 3290

#=each symbol represents 10 hours of field placement (observation, teaching, etc.)    Admitted into Teacher Education Program

OTHER COURSES:

OTHER & HOURS	OTHER & HOURS	OTHER & HOURS	OTHER & HOURS
OTHER & HOURS	OTHER & HOURS	OTHER & HOURS	OTHER & HOURS
OTHER & HOURS	OTHER & HOURS	OTHER & HOURS	OTHER & HOURS

#=each symbol represents 10 hours of field placement (observation, teaching, etc.)

## Checklist for Mathematics Education Majors

<p>Freshman 1st semester</p> <ul style="list-style-type: none"> <li>Declare major</li> <li>Take Intro to Education EDUC 1210</li> <li>Maintain 2.75 GPA</li> <li>Maintain a C or better in English, Comm, Education and Math content courses</li> </ul> <p><b>Passing Praxis Core scores as of Sept. 1, 2016:</b></p> <p>Reading 156 Writing 158 Math 142</p>	<p>2nd semester</p> <ul style="list-style-type: none"> <li>Take Foundations of Education EDUC 2230</li> <li>Maintain 2.75 GPA</li> <li>Maintain a C or better in English, Comm, Education and Math content courses</li> <li>Passing scores on all parts PraxisCore; OR a combined score of 1650 or higher on the old SAT score; OR a combined score of 1,100 or higher on the new SAT; OR a Math score of 550 or higher to exempt Math, and a Reading and Writing score of 550 or higher to exempt Reading and Writing; OR an ACT score of 22 or higher.</li> </ul>
<p>Sophomore 1<sup>st</sup> Semester</p> <ul style="list-style-type: none"> <li>Take Technology course EDUC 1215</li> <li>Maintain 2.75 GPA</li> <li>Maintain a C or better in English, Comm, Education and Math content courses</li> </ul> <p><b>Apply to the Teacher Education Program by Sept 1 if you will have 45 credit hours by the end of the semester. Hold on to the Ed Psych book; it covers everything you need for the PLT.</b></p> <p><b>Provide evidence of passing scores on all parts PraxisCore; OR a combined score of 1650 or higher on the old SAT score; OR a combined score of 1,100 or higher on the new SAT; OR a Math score of 550 or higher to exempt Math, and a Reading and Writing score of 550 or higher to exempt Reading and Writing; OR an ACT score of 22 or higher.</b></p>	<p>2<sup>nd</sup> Semester</p> <ul style="list-style-type: none"> <li>Maintain 2.75 GPA</li> <li>Maintain a C or better in English, Comm, Education and Math content courses</li> </ul> <p><b>Apply to the Teacher Education Program by submitting the application prior to Feb 1 if you will have 45 credit hours by the end of the semester.</b></p> <p><u><a href="#">PraxisCore must be passed prior to March 1<sup>st</sup> to be admitted to Teacher Education Program in the fall.</a></u></p>
<p>Junior 1<sup>st</sup> Semester</p> <ul style="list-style-type: none"> <li>Maintain 2.75 GPA</li> <li>Maintain a C or better in English, Comm, Education and Math content courses</li> <li>Must be in the program to take starred courses.</li> <li>Take Curriculum Development EDSE 3290</li> <li>Complete 20 hours of field placement for Curriculum Development EDSE 3290</li> <li>Take Classroom Management EDSE 4340</li> </ul> <p><b>Turn in Application to student teaching by Sept 1 if teaching in the Fall of the following year and have met all requirements for student teaching by completing the coursework and field experiences.</b></p>	<p>2<sup>nd</sup> semester</p> <ul style="list-style-type: none"> <li>Maintain 2.75 GPA</li> <li>Maintain a C or better in English, Comm, Education and Math content courses</li> <li>Take Reading in the Content EDSE 3395</li> <li>Complete 20 hours of field placement for Reading in the Content EDSE 3395</li> <li>Request that your advisor do a degree audit at this point</li> </ul> <p><b>Turn in Application to student teaching by Feb 1 if teaching in the Spring of the following year and have met all requirements for student teaching by completing the coursework and field experiences.</b></p> <p><b>Sign up for Praxis II Exams</b></p>

<p>You have now completed all of the courses needed for the PLT. Review your Ed Psych book as it has all the information needed to pass the PLT.</p>	<p><b>Mathematics Content Knowledge (5161) – minimum score 160</b>  <b>TAKE Praxis 2 PLT for Secondary Education (test based on classroom mgt, Excep Learner, Ed Psych) (0624 or 5624) – minimum score 157</b></p>
<p>Senior 1<sup>st</sup> Semester          Take Math Methods Course MAED 4310          Take Seminar Curriculum MAED 4210          Complete 30 hours of field placement for Math Methods Course MAED 4310          All coursework must be completed prior to Student Teaching</p>	<p>2<sup>nd</sup> Semester          Ready to student teach          Take Directed Student Teaching EDSE 4600  <b>No other course work can be done during student teaching. Praxis 2 and PLT must be taken and passed prior to student teaching.</b></p>

### Bachelor of Science Degree in Mathematics – Secondary Education

#### General Education Requirements

College 1100 or Honors 1210	1(2) hours
English 1310, 1320	6 hours
Music, Art, or Drama Appreciation	3 hours
History (any course)	3 hours
Communication 2300	3 hours
Biology 1410	4 hours
Physical Education 1200 or HLSC 1300	2(3) hours
Christian Studies 1310 or 1320, 2335	6 hours
Adolescence Psychology 2385	3 hours
<b>Total</b>	<b>31-33 hours</b>

#### Mathematics Requirements

Math 1410 Calculus I	4 hours
Math 2410 Calculus II	4 hours
Math 2420 Calculus III	4 hours
Math 2310 Foundations of Mathematics	3 hours
MATH 3150 Technology for the Mathematics Classroom	1 hour
MATH 3200 Mathematics Teaching Assistant	2 hours
Math 3310 Linear Algebra	3 hours
MATH 3320 Abstract Algebra	3 hours
MATH 3350 Foundations of Geometry	3 hours
MATH 3390 History of Faith & Mathematics	3 hours



MATH 3410 Statistics for Science and Engineering	4 hours
MATH 4340 Mathematical Statistics	3 hours
MATH 4470 Discrete Modeling	4 hours
Math Elective. MATH 3330 Differential Equations, MATH 4320 Real Analysis, MATH 4325 Numerical Analysis, or MATH 4380 Special Topics in Mathematics	3 hours
MAED 4310 Math Methods ( 30 hours field experience)	3 hours
MAED 4210 Seminar in Curriculum and Instruction	2 hours
Physics 1410 and 1420	8 hours
<b>Total</b>	<b>57 hours</b>

### Education Track Courses

Education 1210, Introduction to Education (20 hours field experience)	2 hours
Education 1215, Integration of Technology	2 hours
Education 2230, Foundations of Education	2 hours
Education 2300, Foundations of Reading	3 hours
Education 3290 Curriculum Development (20 hours field experience)	2 hours
Education, 3410, Educational Psychology (10 hours case study)	4 hours
Education 3350, The Exceptional Learner	3 hours
EDSE 3395, Reading in Content (20 hours field experience)	3 hours
EDSE 4340, Classroom Management	3 hours
EDSE 4600, Directed Student Teaching	12 hours
<b>Total</b>	<b>36 hours</b>

### Total Hours for B.S. in Mathematics: Secondary Education Track

Total General Education Requirements	31-33 hours
Total Mathematics Requirements (includes 3 hours math electives)	57 hours
Total Education Track Courses	36 hours
Chapel	4 hours
General Electives	3 hours
<b>Total Hours for Bachelor of Science in Mathematics Secondary Education Track Degree</b>	<b>131/133hours</b>

### Program Design

The program for secondary certification in Mathematics at North Greenville University has been designed to meet the basic requirements of the South Carolina State Department of Education (SDOE), which bases its standards on the requirements of the National Council of the Teachers of Mathematics (NCTM). The

*Teacher Certification Manual* of the SDOE states that candidates must complete coursework to meet the following standards. These courses are all required in the Science Education program.

NCTM Standards 2012

**Standard 1: Content Knowledge**

Effective teachers of secondary mathematics demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, connections, and applications within and among mathematical content domains.

Preservice teacher candidates:

**1a)** Demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, applications in varied contexts, and connections within and among mathematical domains (Number, Algebra, Geometry, Trigonometry, Statistics, Probability, Calculus, and Discrete Mathematics) as outlined in the *NCTM CAEP Mathematics Content for Secondary*

**Standard 2: Mathematical Practices**

Effective teachers of secondary mathematics solve problems, represent mathematical ideas, reason, prove, use mathematical models, attend to precision, identify elements of structure, generalize, engage in mathematical communication, and make connections as essential mathematical practices. They understand that these practices intersect with mathematical content and that understanding relies on the ability to demonstrate these practices within and among mathematical domains and in their teaching.

-Preservice teacher candidates:

**2a)** Use problem solving to develop conceptual understanding, make sense of a wide variety of problems and persevere in solving them, apply and adapt a variety of strategies in solving problems confronted within the field of mathematics and other contexts, and formulate and test conjectures in order to frame generalizations.

**2b)** Reason abstractly, reflectively, and quantitatively with attention to units, constructing viable arguments and proofs, and critiquing the reasoning of others; represent and model generalizations using mathematics; recognize structure and express regularity in patterns of mathematical reasoning; use multiple representations to model and describe mathematics; and utilize appropriate mathematical vocabulary and symbols to communicate mathematical ideas to others.

**2c)** Formulate, represent, analyze, and interpret mathematical models derived from real-world contexts or mathematical problems.

**2d)** Organize mathematical thinking and use the language of mathematics to express ideas precisely, both orally and in writing to multiple audiences.

**2e)** Demonstrate the interconnectedness of mathematical ideas and how they build on one another and recognize and apply mathematical connections among mathematical ideas and across various content areas and real-world contexts.

**2f)** Model how the development of mathematical understanding within and among mathematical domains intersects with the mathematical practices of problem-solving, reasoning, communicating, connecting, and representing.

**Standard 3: Content Pedagogy**

Effective teachers of secondary mathematics apply knowledge of curriculum standards for mathematics and their relationship to student learning within and across mathematical domains. They incorporate research-based mathematical experiences and include multiple instructional strategies and mathematics-specific technological tools in their teaching to develop all students' mathematical understanding and proficiency. They provide students with opportunities to do mathematics – talking about it and connecting it to both theoretical and real-world contexts. They

plan, select, implement, interpret, and use formative and summative assessments for monitoring student learning, measuring student mathematical understanding, and informing practice.

Preservice teacher candidates:

**3a)** Apply knowledge of curriculum standards for secondary mathematics and their relationship to student learning within and across mathematical domains.

**3b)** Analyze and consider research in planning for and leading students in rich mathematical learning experiences.

**3c)** Plan lessons and units that incorporate a variety of strategies, differentiated instruction for diverse populations, and mathematics-specific and instructional technologies in building all students' conceptual understanding and procedural proficiency.

**3d)** Provide students with opportunities to communicate about mathematics and make connections among mathematics, other content areas, everyday life, and the workplace.

**3e)** Implement techniques related to student engagement and communication including selecting high-quality tasks, guiding mathematical discussions, identifying key mathematical ideas, identifying and addressing student misconceptions, and employing a range of questioning strategies.

**3f)** Plan, select, implement, interpret, and use formative and summative assessments to inform instruction by reflecting on mathematical proficiencies essential for all students.

**3g)** Monitor students' progress, make instructional decisions, and measure students' mathematical understanding and ability using formative and summative assessments.

#### **Standard 4: Mathematical Learning Environment**

Effective teachers of secondary mathematics exhibit knowledge of adolescent learning, development, and behavior. They use this knowledge to plan and create sequential learning opportunities grounded in mathematics education research where students are actively engaged in the mathematics they are learning and building from prior knowledge and skills. They demonstrate a positive disposition toward mathematical practices and learning, include culturally relevant perspectives in teaching, and demonstrate equitable and ethical treatment of and high expectations for all students. They use instructional tools such as manipulatives, digital tools, and virtual resources to enhance learning while recognizing the possible limitations of such tools.

Preservice teacher candidates:

**4a)** Exhibit knowledge of adolescent learning, development, and behavior and demonstrate a positive disposition toward mathematical processes and learning.

**4b)** Plan and create developmentally appropriate, sequential, and challenging learning opportunities grounded in mathematics education research in which students are actively engaged in building new knowledge from prior knowledge and experiences.

**4c)** Incorporate knowledge of individual differences and the cultural and language diversity that exists within classrooms and include culturally relevant perspectives as a means to motivate and engage students.

**4d)** Demonstrate equitable and ethical treatment of and high expectations for all students.

**4e)** Apply mathematical content and pedagogical knowledge to select and use instructional tools such as manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies (e.g., graphing tools, interactive geometry software, computer algebra systems, and statistical packages); and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools.

#### **Standard 5: Impact on Student Learning**

Effective teachers of secondary mathematics provide evidence demonstrating that as a result of their instruction, secondary students' conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and application of major mathematics concepts in varied contexts have increased. These teachers support the continual development of a productive disposition toward mathematics. They show that new student mathematical knowledge has been created as a consequence of their ability to engage students in mathematical experiences that are developmentally appropriate, require active engagement, and include mathematics-specific technology in building new knowledge.

Preservice teacher candidates:

**5a)** Verify that secondary students demonstrate conceptual understanding; procedural fluency; the ability to formulate, represent, and solve problems; logical reasoning and continuous reflection on that reasoning; productive disposition toward mathematics; and the application of mathematics in a variety of contexts within major mathematical domains.

**5b)** Engage students in developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology in building new knowledge.

**5c)** Collect, organize, analyze, and reflect on diagnostic, formative, and summative assessment evidence and determine the extent to which students' mathematical proficiencies have increased as a result of their instruction.

#### **Standard 6: Professional Knowledge and Skills**

Effective teachers of secondary mathematics are lifelong learners and recognize that learning is often collaborative. They participate in professional development experiences specific to mathematics and mathematics education, draw upon mathematics education research to inform practice, continuously reflect on their practice, and utilize resources from professional mathematics organizations.

Preservice teacher candidates:

**6a)** Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics.

**6b)** Engage in continuous and collaborative learning that draws upon research in mathematics education to inform practice; enhance learning opportunities for all students' mathematical knowledge development; involve colleagues, other school professionals, families, and various stakeholders; and advance their development as a reflective practitioner.

**6c)** Utilize resources from professional mathematics education organizations such as print, digital, and virtual resources/collections.

In addition to completing these types of courses, candidates will be required to complete supplementary education courses to fully address all NCTM Standards. The BS in Mathematics Secondary Education Track program provides our graduates with the strong content knowledge in the mathematics needed to pass Praxis II and the practice GRE and to graduate as highly qualified Mathematics teachers for secondary schools.

#### **NCTM/CAEP STANDARDS for Initial Preparation of Teachers of Secondary Mathematics Grades 9–12**

Each pre-service teacher in the mathematics education track program will additionally be evaluated using performance assessments established by the College of Education. Both the cooperating teacher and the supervising teacher will complete this assessment data. Candidates must score at the acceptable or target levels.

**Highly Qualified Teachers**  
(No Child Left Behind)

Secondary education candidates in mathematics will meet all South Carolina State and North Greenville University requirements for the Secondary Education Teacher Program. They will be prepared to obtain full state certification and have no licensure requirements waived on an emergency, temporary, or provisional basis.

Candidates can demonstrate their competencies and skills by (a) passing rigorous university and state academic subject-matter test, Praxis II and practice GRE, (b) completing the mathematics academic major with 2.5 average, (c) completing the ADEPT4.0 portfolio, (d) Seminar Presentation, (e) The Teacher Work Sample, (f) oral and written presentations of the portfolio and the Mathematics Notebook in the Seminar Course, (g) utilizing the technologies needed to communicate mathematically and to teach, (h) demonstration of professional teaching standards, (i) evaluations by cooperating and supervising teachers and (j) candidate assessment of experience, and the assessment of dispositions. Scoring rubrics for each of these are found in Appendix G.

North Greenville University was one of the first institutions in South Carolina to require that all teacher education candidates pass both, Praxis I and Praxis II, exams prior to student teaching. Candidates must pass Praxis I for admission into the Mathematics Secondary Education Track Program. To enter the student teaching portion of the program, the candidate must pass Praxis II and PLT. All program assessments are aligned to the College of Education Framework and the NCTM/CAEP standards.

*No Child Left Behind* identifies mathematics as a core subject. In determining the extent of subject-matter competency sufficient to identify North Greenville University (NGU) students as highly qualified to teach a particular mathematics course, South Carolina requires the candidate to demonstrate competency in that subject. All NGU graduates of the Mathematics Secondary Education Track Program will be highly qualified as demonstrated on their passing the Praxis II and practice GRE and all components of field experiences to a high standard.

## **PROGRAM ADMISSION, PROGRESSION, AND EXIT REQUIREMENTS**

### **Program Admission**

Application to North Greenville University's Secondary Education Licensure Program should take place no later than the end of the student's freshman year. Meeting the standards formulated by the College of Education and the School of Science and Math in no way is a guarantee of the student's success in a classroom, but demonstrates the candidate's serious desire to meet the academic requirements for the secondary teacher.

Candidates must meet the following initial entrance requirements into the Secondary Education Licensure Program:

- A minimum cumulative GPA of 2.75
- The successful completion of 45 semester hours of undergraduate study. (Transfer students must complete a minimum of 15 hours at NGU.)
- The student must have exhibited satisfactory citizenship and behavior while enrolled at NGU. Secondary teacher candidates who have been expelled or suspended are not eligible for initial entry until fully reinstated in good standing by the University.
- Maintain a 2.5 average or better in all required mathematics courses
- Receive a "C" or better in English 1310 and 1320, English 2000 level, Communication 2300, and all education/mathematics courses.
- Demonstration of minimum competency in oral and written communications skills, as well as computational skills, as shown by acceptable scores on all sections of Praxis I.
- Make an acceptable score on the Assessment of Dispositions
- Meet the requirements of North Greenville University in chapel and cultural events.

### **Progression and Exit Requirements (Expected Learning Outcomes for Secondary Education Majors in -mathematics):**

**Communication Skills:** Candidates will be prepared for communicating with high school students throughout the program.

1. Candidates must maintain a “C” or better in English 1310, 1320, 2000 level and Communication 2300 and pass the Praxis I exam.
2. Candidates must learn about diversity through such courses as The Exceptional Learner, World Religions, as well as through Reading in the Content Area, Math Methods, Classroom Management, and culturally diverse field experiences.
3. Throughout the field experience component, candidates will be placed in positions requiring the skills to communicate with students in secondary schools.

**Problem-Solving:** Candidates will gain the skills and knowledge to solve problems mathematically and systematically.

1. Candidates will solve problems related to student assessment and performance in secondary school settings, as well as teaching a diverse student population.
2. Candidates will address learner needs in planning, implementing, and assessing various learning strategies both in theoretical and practical applications.
3. Candidates will align learning outcomes with standards during planning, implementation, assessment, and revision.

**Understanding Diversity:** Candidates will become aware of various ethnic and cultural differences among students in public schools.

1. Candidates will address diverse needs through The Exceptional Learner, Educational Psychology, Foundations of Education, and during the Field Experience component.
2. Candidates will know how to differentiate instruction for the diverse populations in school in the U.S., and globally, The Exceptional Learner, and Introductory courses addressing diversity.
3. Candidates will demonstrate mastery through the assessment of dispositions, successful completion of field experiences, and directed student teaching.
4. Candidates will employ multiple teaching methods to meet various learning styles (i.e., auditory, visual, and tactile forms) of teaching and address these accommodations in all lesson plans.

**Organizational and Writing Skills:** Candidates in this program will gain skills and the understanding needed to plan for student learning through course work such as Reading in the Content Area, Methods courses, and Classroom Management.

1. Candidates will demonstrate such skills in organization and writing through lesson planning, assessment, notebook production, and the ADEPT4.0 evaluation.
2. Candidates must perform above average in oral and written communication in coursework and field experiences.

**Dispositions:** Candidates will cultivate particular attitudes and traits related to effective teaching. Assessment will be made through the Assessment of Disposition Form completed by NGU faculty and cooperating teachers.

1. Candidates will demonstrate mastery through the Assessment of Dispositions.
2. Candidates will demonstrate a high degree of moral integrity and demonstrate care and fairness for all students.

**Teaching Certifications:** Candidates will be certified to teach in S.C. secondary schools and will meet all the requirements of S.C. State Board of Education.

1. Candidates will take and pass all required sections of the Praxis II exam.
2. Candidates will successfully complete the student teaching requirements.
3. Candidates will maintain a 3.0 or better on the assessment of dispositions.
4. Candidates will apply for certification and complete the required background checks.

Furthermore, candidates must complete all required program courses in Education with a “C” or better and all Mathematics course with a 2.5 GPA, and pass the Praxis II exam in Mathematics, PLT, and take a cumulative exam.

**General Education Requirements:** The general education requirements for this program would be the general education requirements for the mathematics major with a few exceptions shown on page 11.

## **DESCRIPTION OF THE WAYS THE PROGRAM WILL MEET STATE STANDARDS**

The Mathematics Secondary Education Track Degree Program will meet the State Department of Education standards in the following ways:

### **Clinical Field Experiences**

The candidate will gain at least 100 hours of Field Experience in grades 9-12 including three diverse placements as well as a case study. The candidate must complete each Field Experience placement with a minimum average of 3 out of 5 on the cooperating and supervising teacher evaluations.

- 1. Introduction to Education (EDUC 1210).** The candidate will observe for twenty hours in grades 9-12. The component has multiple assessments including a timesheet, cooperating teacher evaluation, candidate evaluation of the experience, and list of activities in which the candidate participated, along with a reflective journal based on ADEPT4.0 standards and Assessment of Dispositions (AOD).
  - 2. Curriculum Development (EDSE 3290).** The candidate will observe classroom instructional techniques in area schools and plan and teach two lessons. This component will utilize the assessment of the cooperating teacher, teacher of record, timesheet, the AOD, and unit plan. The candidate will observe for twenty hours in a local school and plan and teach two lessons.
  - 3. Math Methods (MAED 4310).** The candidate will teach a minimum of 4 lessons and participate in grades 9-12 for thirty hours. The component has multiple assessments including a timesheet, cooperating teacher evaluation, mentor notes, supervising teacher evaluation, lesson evaluations, candidate evaluation of the experience, the assessment of dispositions. The final grade in the course includes the Field Experience.
  - 4. Reading in the Content Area (EDSE 3395).** The candidate will coach students and improve reading using the content of science and participate in grades 9-12 for twenty hours. The component has multiple assessments including a timesheet, cooperating teacher evaluation, mentor notes, supervising teacher evaluation, two lesson evaluations, candidate evaluation of the experience, and the final grade in the course includes the field experience.
- Case Study Experience**
- 5. Educational Psychology (EDUC 3410).** The class has a component of ten hours where candidates observe particular behaviors of a student in a 9-12 classroom and are assessed. The assessment includes a timesheet and assignment.

### **9-12 Curriculum Standards**

Each candidate will have a copy of the standards for mathematics for all levels to ensure that there is a complete understanding of the spiraling nature of the curriculum. Candidates will list the standards addressed in each unit when preparing lesson plans for grades 9-12 instruction. During content and pedagogy classes, candidates will address the standards as part of each course to reinforce their understanding of the importance of covering all of the state standards applicable to the various grade levels.

### **EEDA and Safe Schools Climate Act**

Candidates will learn about and implement key components of all SC State standards. Knowledge of the EEDA will be gained in Foundations of Education and Curriculum Development. The SC Safe Schools Climate Act will be presented in Classroom Management. Candidates will demonstrate mastery and application in the Lesson Plans and Field Experience Components.

## Philosophy of Mathematics Education

The Mathematics Department of North Greenville University has adopted the standards of the National Council of the Teachers of Mathematics (NCTM) and incorporated them into an overall mathematics education philosophy.

- 1. Importance of content in teaching.** NGU will, within its Mathematics Secondary Education Track Program, strive to produce mathematics teachers that thoroughly understand the knowledge base and processes and can easily relate that information to students. These teachers will be able to implement problems solving, mathematical communication and representations, data analyses, and make connections of mathematics to real-world problems. NGU will produce mathematics teachers that will be literate in processes and procedures of mathematics and who can critically analyze, formulate appropriate questions, and engage in active learning. The candidates will learn to relate the impact of mathematics in all areas of daily life – on personal and community levels - in order to stimulate more connections to real-world problems.
- 2. Development of teaching skills.** Although content knowledge is incredibly important in the role of teacher, the ability to teach is also crucial. The department will produce teachers that are skilled in explaining the content and enhancing mathematical discussion in various classroom and real-world settings. Candidates will become proficient in the use of technology and mathematical programs. They will develop organizational skills – such as lesson plan preparation, goal setting, and resource location – as well as teaching strategies to enhance their future teaching performance. Candidates will also become proficient in the use of assessment tools for high school students. Based on such assessments, appropriate responses and adjustments will also be applied to aid in further learning.
- 3. Development of learning environments.** Active learning can only be achieved when a supportive learning environment is in place. Candidates will learn how to create such an environment to ensure the success of all high school students. Priority will be placed on ensuring the safety of all students – both physically and emotionally – in the classroom.
- 4. Implementation of Professional Practice.** This program will prepare candidates to interact with their colleagues in the professional community. Membership and participation in professional societies will be encouraged so that active collaborative learning continues to occur long after graduation from NGU. Candidates will join at least one professional organization in mathematics or education.

### Program Diversity

The candidate will be engaged in five field experiences prior to student teaching. (**Appendix F**) Candidates will experience diverse student populations within the three school districts of Spartanburg School District 1, Greenville County School District, and Pickens County School District. Candidates will be assigned to rural, urban, and Title 1 schools that reflect the diverse nature of the region.

Program Diversity is further enhanced by the diversity on campus, special speakers, the multicultural experiences of the faculty, diverse faculty on campus, chapel programs, and cultural events.

### Assessments

Assessments in the program will include performance assessments of teaching, which focus on what candidates know and can do to enhance grades 9-12 student achievement. A combination of internal and external assessments will be gathered. Content knowledge will be assessed through the national exams including Praxis I and II, and a cumulative exam. Candidates will additionally prepare a Mathematics notebook aligned directly to NCTM standards showing mastery over content and concepts. Additionally, the Seminar Course will involve mock interviews, resume writing, the final production of the mathematics notebook, and an oral presentation. This presentation is evaluated by a jury of faculty.

Candidates will be assessed using the Assessment of Dispositions (AOD) scoring guide for both classroom learning and teaching grades 9-12. Field Experiences and Student Teaching are assessed using multiple assessments, including Cooperating Teacher evaluation, Supervising Teacher evaluation, Student self-evaluation, Mentor notes, and AOD. Program assessments are aligned to the College of Education Framework and the NCTM standards.



Candidates carry out unit plans and teaching lessons in 9-12 classrooms during the junior and senior years prior to and including student teaching. The student teaching assessments include the Teacher Work Sample (CFUP/A), the ADEPT4.0 Portfolio and presentations, and evaluation by the cooperating teacher and supervising teacher.

### Program and Performance Assessments

1. **Mathematics Notebook:**  
Candidates will prepare a notebook reflecting the standards 2012 of NCTM. Each section includes evidence of candidate mastery over the standards. The notebook has sections completed in both MAED courses. The Candidate defends the notebook during a seminar presentation before a juried faculty panel. Rubrics are in appendix G.
  
2. **Planning for Instruction:**  
Candidates will address the standards in all lessons and will be evaluated by the cooperating teacher and the supervising teacher. **Sample lessons, units, Field Experience Evaluations, and the Teacher Work Sample will be found in the Student Teaching ADEPT4.0 Portfolio.** Descriptions and rubrics are attached in Appendix H.
  
3. **Student Teaching:**  
Candidates will also address the professional teaching standards for South Carolina: **ADEPT4.0**, meeting all of the proficiency standards before the close of student teaching. Evidence of attainment will be assessed through the Student Teaching ADEPT4.0 evaluation, **The Teacher Work Sample**, cooperating teacher evaluation, supervising teacher evaluation, candidate assessment of the experience, the field experience evaluations, and the **assessment of dispositions**. See Appendix

Assessments occur at major benchmarks in the program.

**III d ii:** Table 3.1: Candidate and Program Assessments

Assessment	Data collected	Data recorded	Data evaluated
The Candidate	1. Praxis I/SAT/ACT scores 2. Specified course minimum grades 3. Specified minimum GPA(2.75) 5. Assessment of Dispositions (AOD) 6. The Mathematics Notebook 7. Field Experience Evaluations (FEE) 8. Lesson Plans 9. Unit Plans 10. Praxis II 11. Evaluations of student teachers by cooperating teachers and supervising teachers 12. Teacher Work Sample 13. ADEPT4.0 Portfolio and presentation 14. Seminar Presentation	The Jenzebar System database, the Programs Excel spreadsheets, and candidate folders include data on each assessment. These databases aggregate and provide reports needed for each benchmark and are found on the COE share drive.	Candidate Assessments are reviewed for: -feedback to candidate -feedback for benchmark advancement -review of syllabi and course alignment to the conceptual framework and state standards -course modification -program adjustments

<p>The Secondary Education Program</p>	<ol style="list-style-type: none"> <li>1. Aggregated Candidate Data</li> <li>2. Candidate evaluations of instructors, courses, field experiences, and student teaching</li> <li>3. SPA reviews</li> <li>4. Alignment of syllabi and program with the conceptual framework, state standards, and SPA standards</li> <li>5. Exit interviews with candidates.</li> <li>6. Post-graduate surveys</li> <li>7. Principal's surveys</li> </ol>	<p>Aggregated candidate data reports from JENZEBAR and spreadsheets for review of evaluations of instructors, courses, Field Experiences, and student teaching</p>	<ul style="list-style-type: none"> <li>-review of assessments and scoring rubrics</li> <li>-feedback to faculty for the development of goals and professional development</li> <li>-identification of areas for improvement</li> </ul>
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Benchmarks for Candidate Assessment

<b>Benchmark</b>	<b>Assessment Data</b>	<b>Person responsible</b>
<p>1. Admission to Teacher Education Program for Secondary Education</p>	<ol style="list-style-type: none"> <li>1. Overall GPA minimum standard 2.75. (state standard)</li> <li>2. 2.5 minimum in all Mathematics courses</li> <li>3. C or better in all Education Courses.</li> <li>4. C or better in Oral Communication and Chapel</li> <li>5. Praxis 1, or acceptable score on SAT/ACT</li> <li>6. AOD</li> <li>7. FEE.</li> </ol>	<p>1,2,3,4 found on JENZEBAR and Reviewed by Director of Teacher Education and Teacher Education Committee</p> <p>5 Carried out by ETS and reviewed by Director of Teacher Education and Teacher Education Committee</p> <p>6, 7 Examined by designated Mathematics Faculty, recorded by records manager, reviewed by Director of Teacher Education and Teacher Education Committee</p>
<p>2. Admission to Student Teaching</p>	<ol style="list-style-type: none"> <li>1. Overall GPA minimum 2.75</li> <li>2. Specified Grade minimums for core courses</li> <li>3. The Mathematics Notebook</li> <li>4. Sample Lesson/Unit Plans</li> <li>5. FEE</li> <li>6. AOD</li> <li>7. Mentor's evaluations</li> <li>8. Seminar Presentation</li> <li>9. Unit Plans</li> </ol>	<p>Faculty Advisors and course instructors review all data to ensure candidates are meeting the standards.</p>
<p>3. Completion of Student Teaching</p>	<ol style="list-style-type: none"> <li>1. Overall GPA</li> <li>2. Specified Grade minimums for core courses</li> <li>3. Student Teaching Evaluations from cooperating teacher and supervising teacher</li> <li>4. ADEPT4.0 Evaluation of student teaching</li> <li>5. ADEPT4.0 Portfolio presentation and celebration</li> <li>6. Teacher Work Sample</li> <li>7. AOD</li> <li>8. Mathematics Addendum</li> </ol>	<p>Reviewed by Supervising teacher, Reviewed by Director of Teacher Education, and by Teacher Education Committee</p>

4. Completion of Program of Study.	1. Meets all requirements for graduation 2. Meets all the requirements for certification 3. Exit surveys 4. Principals reports	Reviewed by Director of Teacher Education and the registrar.
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Please find attached the rubrics for the Mathematics Notebook and other assessments in Appendix G

**Alignment of Conceptual Framework, Benchmarks, Assessments, and Standards**

<b>OUTCOME 1: THE TEACHER IS AN EFFECTIVE PRACTITIONER, GROUNDED IN CONTENT KNOWLEDGE AND SKILLED IN IMPACTING STUDENT LEARNING.</b>			
A. Candidates demonstrate mastery of the critical content and processes in their fields of study within the context of a broad understanding of the liberal arts.	Benchmark 1, 2	Praxis II Content Exams, minimum grades in core courses, minimum GPA.	CAEP 1.1, APS 6, NCTM 1a
B. Candidates communicate subject matter effectively and accurately to motivate student learning, and develop deeper levels of understanding of key concepts.	Benchmark 1, 2, 3	FEE, Oral Grammar Rubric, AOD, Lesson Plan Rubric, ADEPT4.0 Notebook, Mathematics Notebook	CAEP 1.2, APS 4, NCTM 2d
C. Candidates utilize the key principles of educational purposes, curriculum, instruction, and assessment by designing, adapting, and selecting a variety of appropriate assessments and using the data to improve student learning and instruction.	Benchmark 2, 3	Lesson Plans, ADEPT4.0 evaluation, Unit, CFUP/A, Mathematics Notebook	CAEP 1.3, APS 3, NCTM 3f
D. Candidates plan and implement lessons utilizing the knowledge of student diversity, human development, and research in order to help all students learn.	Benchmark 2, 3	Lesson Plans, Unit plan, CFUP/A, ADEPT4.0 evaluation, Mathematics Notebook	CAEP 1.5, APS 2, NCTM 3c
E. Candidates employ multiple resources beyond the textbook such as including concrete objects, online resources, and media to meet the needs of all learners.	Benchmark 2,3	Unit Plans, Lesson Plans, FEE, CFUP/A, Mathematics Notebook	CAEP 1.4, APS 5, NCTM 4e
F. Candidates use a variety of effective instructional techniques, models, methods (e.g., close reading, critical thinking, problem-solving), and materials in a logical sequence for teaching and learning	Benchmark 2, 3	Lesson Plans, Unit Plan, FEE, CFUP/A, Mathematics Notebook	CAEP 1.6, APS 5, NCTM 4b
<b>OUTCOME 2: THE TEACHER IS A NURTURING AND CARING LEADER.</b>			
A. Candidates exhibit personal responsibility, trustworthiness, fairness, and teamwork in the school community.	Benchmark 1, 2, 3	AOD	CAEP 1.7, APS 10, NCTM 6b
B. Candidates respect, value, and establish high expectations for all students creating an inclusive learning environment.	Benchmark 1, 2, 3	AOD, CFUP/A, ADEPT4.0	CAEP 1.6, APS 4, NCTM 4d

C. Candidates design and maintain an effective, safe learning environment that meets the student’s physical, social, emotional, and cognitive needs.	Benchmark 1, 2, 3	SC safe schools climate act, AOD, CFUP/A, ADEPT4.0	APS 8 NCTM 4c
D. Candidates value cooperation, practice collaboration, and display fairness and empathy when working with colleagues and families.	Benchmark 1, 2, 3	AOD	CAEP 1.8, APS 10 NCTM 6b
<b>OUTCOME 3: THE TEACHER IS A LIFELONG LEARNER WHO BY EXAMPLE AND INSTRUCTION INVITES LIFELONG LEARNING IN STUDENTS.</b>			
A. Candidates engage in activities and utilize resources that contribute to the improvement of self, the profession, and community.	Benchmark 1, 2, 3	AOD, ADEPT4.0 evaluation, Portfolio displays, Mathematics Notebook	APS 10 NCTM 6c
B. Candidates model inquiry and reflection of self, students, families, and communities based on student performance.	Benchmark 2, 3	Lesson Plans, CFUP/A, and ADEPT4.0 reflections	CAEP 1.3, APS 10 NCTM 5c
C. Candidates reflect on their choices and biases in order to build strong relationships with learners, families, colleagues, and the community.	Benchmark 2, 3	Lesson Plans, CFUP/A, and ADEPT4.0 reflections	CAEP 1.9, APS 10 NCTM 6b

Junior and Senior years	Secondary Mathematics Education Courses: ADEPT 4.0	
	EDSE 3290 Curriculum Development	Domain 1: Instruction, Domain 2: Planning Candidates plan and teach two lessons. Use the checklist and math extension to score.
	EDSE 3395 Reading & Writing in the Content Area	Domain 1: Instruction, Domain 2: Planning Candidates plan and teach two lessons. Use the checklist and math extension to score.
	EDSE 4340 Classroom Management	Domain 3: Environment Use the Domain 3 rubric to score
	MAED 4310 Math Methods	Domain 1: Instruction, Domain 2: Planning, Domain 3: Environment. Students teach six observed lessons and complete 30 hours of observation. Begin work on the Digital Portfolio. Checklist, math extension, Domain 3
	MAED 4210 Seminar in Curriculum and Instruction	Domain 4: Professionalism Use AOD and Domain 4 to assess
	Student Teaching	<p>Observation 1: Announced (evaluated with Domain 1: Instructional Indicators Checklist) and mathematics extension.</p> <p>Observation 2: ADEPT 4.0 lesson observation (ADEPT 4.0 Rubric for Domains 1, 2, 3, &amp; 4) Includes pre and post conferences and mathematics extension,</p> <p>Observation 3: Unannounced (evaluated with Domain 1: Instructional Indicators Checklist) and mathematics extension.</p> <p>Includes also a mid-term and final conference.</p>

**Exhibit 2: NCTM standards aligned to national, state, and institutional standards.**

NCTM Standards 2012	Standards Alignment	Assessments
<p>NCTM Standards 2012</p> <p><b>Standard 1: Content Knowledge</b></p> <p>Effective teachers of secondary mathematics demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, connections, and applications within and among mathematical content domains.</p> <p>Pre-service teacher candidates:</p> <p><b>1a)</b> Demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, applications in varied contexts, and connections within and among mathematical domains (Number, Algebra, Geometry, Trigonometry, Statistics, Probability, Calculus, and Discrete Mathematics) as outlined in the <i>NCTM NCATE Mathematics Content for Secondary</i></p>	<p>APS 6: provides content COE IA &amp; IB CAEP 1.1, InT 4</p>	<p>Assessments</p> <ol style="list-style-type: none"> <li>1. Course grades</li> <li>2. Mathematics Notebook</li> <li>3. Praxis II L21</li> </ol>
<p><b>Standard 2: Mathematical Practices</b></p> <p>Effective teachers of secondary mathematics solve problems, represent mathematical ideas, reason, prove, use mathematical models, attend to precision, identify elements of structure, generalize, engage in mathematical communication, and make connections as essential mathematical practices. They understand that these practices intersect with mathematical content and that understanding relies on the ability to demonstrate these practices within and among mathematical domains and in their teaching.</p> <p>Pre-service teacher candidates:</p> <p><b>2a)</b> Use problem solving to develop conceptual understanding, make sense of a wide variety of problems and persevere in solving them, apply and adapt a variety of strategies in solving problems confronted within the field of mathematics and other contexts, and formulate and test conjectures in order to frame generalizations.</p> <p><b>2b)</b> Reason abstractly, reflectively, and quantitatively with attention to units, constructing viable arguments and proofs, and critiquing the reasoning of others; represent and model generalizations using mathematics; recognize structure and express regularity in patterns of mathematical reasoning; use multiple representations to model and describe mathematics; and utilize appropriate mathematical vocabulary and symbols to communicate mathematical ideas to others.</p> <p><b>2c)</b> Formulate, represent, analyze, and interpret mathematical models derived from real-world contexts or mathematical problems.</p> <p><b>2d)</b> Organize mathematical thinking and use the language of mathematics to express ideas precisely, both orally and in writing to multiple audiences.</p> <p><b>2e)</b> Demonstrate the interconnectedness of mathematical ideas and how they build on one another and recognize and apply mathematical connections among mathematical ideas and across various content areas and real-world contexts.</p>	<p>APS 5 &amp; 7 COE IF &amp; 3D CAEP 1.2, InT 5</p> <p>Mathematical Practices Section of Notebook. 2A: Problem-solving Five strategies/activities 2B: Reasoning and proof Five strategies/activities 2C: Real-world problems Five activities 2D: Vocabulary bank 2E: Math in other contexts and making connections Two STEM lessons 2F: Curriculum maps to connect domains Two lessons that tied domains</p>	<ol style="list-style-type: none"> <li>1. Course grades</li> <li>2. Math Notebook (Mathematical Practices)</li> <li>3. FEE</li> <li>4. Praxis II</li> <li>5. Unit Plan</li> </ol>

<p><b>2f)</b> Model how the development of mathematical understanding within and among mathematical domains intersects with the mathematical practices of problem-solving, reasoning, communicating, connecting, and representing.</p>		
<p><b>Standard 3: Content Pedagogy</b>  Effective teachers of secondary mathematics apply knowledge of curriculum standards for mathematics and their relationship to student learning within and across mathematical domains. They incorporate research-based mathematical experiences and include multiple instructional strategies and mathematics-specific technological tools in their teaching to develop all students’ mathematical understanding and proficiency. They provide students with opportunities to do mathematics – talking about it and connecting it to both theoretical and real-world contexts. They plan, select, implement, interpret, and use formative and summative assessments for monitoring student learning, measuring student mathematical understanding, and informing practice.  Pre-service teacher candidates:  <b>3a)</b> Apply knowledge of curriculum standards for secondary mathematics and their relationship to student learning within and across mathematical domains.  <b>3b)</b> Analyze and consider research in planning for and leading students in rich mathematical learning experiences.  <b>3c)</b> Plan lessons and units that incorporate a variety of strategies, differentiated instruction for diverse populations, and mathematics-specific and instructional technologies in building all students’ conceptual understanding and procedural proficiency.  <b>3d)</b> Provide students with opportunities to communicate about mathematics and make connections among mathematics, other content areas, everyday life, and the workplace.  <b>3e)</b> Implement techniques related to student engagement and communication including selecting high-quality tasks, guiding mathematical discussions, identifying key mathematical ideas, identifying and addressing student misconceptions, and employing a range of questioning strategies.  <b>3f)</b> Plan, select, implement, interpret, and use formative and summative assessments to inform instruction by reflecting on mathematical proficiencies essential for all students.  <b>3g)</b> Monitor students’ progress, make instructional decisions, and measure students’ mathematical understanding and ability using formative and summative assessments.</p>	<p>APS 4, 7, &amp; 8  COE IC, ID, 2B, 2C, 3C, 3D  CAEP 1.3, 1.4, 1.5, 1.5  In TASK 5,6,7,8  ISTE</p> <p>Content Pedagogy section of Mathematics Notebook  3a: Include your unit plan  3b: include your demographics and two article reviews on teaching mathematics  3c: Two lesson plans demonstrating accommodations plus reflections on if the accommodations helped  3d: Two lesson plans demonstrating mathematics connected to life  3e: Two lessons showing the use of EQ, DOK, HOT, and questioning techniques.  3f: Show the pre- and post-test of the unit. Show the analysis of an assessment related to a lesson taught.  3G: Include the reflections of all lessons taught and what changes you would make to increase student engagement and learning.</p>	<ol style="list-style-type: none"> <li>1. Taught Lesson plans</li> <li>2. FEE</li> <li>3. CFUP/A</li> <li>4. Seminar Presentation</li> <li>5. Math Notebook</li> </ol>
<p><b>Standard 4: Mathematical Learning Environment</b>  Effective teachers of secondary mathematics exhibit knowledge of adolescent learning, development, and behavior. They use this knowledge to plan and create sequential learning opportunities grounded in mathematics education research where students are actively engaged in the mathematics they are learning and building from prior knowledge and skills. They demonstrate a positive disposition toward mathematical practices and learning, include culturally relevant perspectives in teaching, and demonstrate equitable and ethical treatment of and high expectations for all students.</p>	<p>APS 2, 4, 5, 7, 8  COE: I D,E,F; 2 B,C,E; 3D  CAEP 1.  INTASC 2,3  Div</p>	<ol style="list-style-type: none"> <li>1. AOD</li> <li>2. Unit Plans</li> <li>3. ADEPT4.0 APS 1</li> <li>4. CFUP/A</li> <li>5. Math Notebook</li> </ol>

<p>They use instructional tools such as manipulatives, digital tools, and virtual resources to enhance learning while recognizing the possible limitations of such tools.</p> <p>Pre-service teacher candidates:</p> <p><b>4a)</b> Exhibit knowledge of adolescent learning, development, and behavior and demonstrate a positive disposition toward mathematical processes and learning.</p> <p><b>4b)</b> Plan and create developmentally appropriate, sequential, and challenging learning opportunities grounded in mathematics education research in which students are actively engaged in building new knowledge from prior knowledge and experiences.</p> <p><b>4c)</b> Incorporate knowledge of individual differences and the cultural and language diversity that exists within classrooms and include culturally relevant perspectives as a means to motivate and engage students.</p> <p><b>4d)</b> Demonstrate equitable and ethical treatment of and high expectations for all students.</p> <p><b>4e)</b> Apply mathematical content and pedagogical knowledge to select and use instructional tools such as manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies (e.g., graphing tools, interactive geometry software, computer algebra systems, and statistical packages); and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools.</p>	<p>Mathematical Learning Environment</p> <p>4a: Include your class rules And organizational plan</p> <p>4b: Include two lessons demonstrating research used and how to test for and build on prior knowledge</p> <p>4c: Include five researched strategies to increase student engagement/motivation</p> <p>4d: Include the FEE from all taught lessons</p> <p>4e: Include two lessons that utilize a variety of resources and technology and annotated list of ten resources to aid learning.</p>	
<p><b>Standard 5: Impact on Student Learning</b></p> <p>Effective teachers of secondary mathematics provide evidence demonstrating that as a result of their instruction, secondary students’ conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and application of major mathematics concepts in varied contexts have increased. These teachers support the continual development of a productive disposition toward mathematics. They show that new student mathematical knowledge has been created as a consequence of their ability to engage students in mathematical experiences that are developmentally appropriate, require active engagement, and include mathematics-specific technology in building new knowledge.</p> <p>Pre-service teacher candidates:</p> <p><b>5a)</b> Verify that secondary students demonstrate conceptual understanding; procedural fluency; the ability to formulate, represent, and solve problems; logical reasoning and continuous reflection on that reasoning; productive disposition toward mathematics; and the application of mathematics in a variety of contexts within major mathematical domains.</p> <p><b>5b)</b> Engage students in developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology in building new knowledge.</p>	<p>APS 3, 7</p> <p>COE: I C, D, 2 B, 3 D</p> <p>Mathematics Notebook</p>	<ol style="list-style-type: none"> <li>1. ADEPT4.0 APS1</li> <li>2. CFUP/A</li> <li>3. Mathematics Notebook (Student impact project)</li> </ol>



<p><b>5c)</b> Collect, organize, analyze, and reflect on diagnostic, formative, and summative assessment evidence and determine the extent to which students' mathematical proficiencies have increased as a result of their instruction.</p>		
<p><b>Standard 6: Professional Knowledge and Skills</b>  Effective teachers of secondary mathematics are lifelong learners and recognize that learning is often collaborative. They participate in professional development experiences specific to mathematics and mathematics education, draw upon mathematics education research to inform practice, continuously reflect on their practice, and utilize resources from professional mathematics organizations.  Pre-service teacher candidates:  <b>6a)</b> Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics.  <b>6b)</b> Engage in continuous and collaborative learning that draws upon research in mathematics education to inform practice; enhance learning opportunities for all students' mathematical knowledge development; involve colleagues, other school professionals, families, and various stakeholders; and advance their development as a reflective practitioner.  <b>6c)</b> Utilize resources from professional mathematics education organizations such as print, digital, and virtual resources/collections.</p>	<p>APS 10  COE: 3 A, B,C, D</p> <p>Professional section of Math Notebook:  6a: Include the review of two scholarly journal articles.  Include membership in one professional organization  Include Professional development sheet from methods and APS 10 from student teaching  Include at least one professional conference  AOD scores</p>	<ol style="list-style-type: none"> <li>1. ADEPT4.0 APS 10</li> <li>2. Professional Development Plan</li> <li>3. Math Notebook</li> <li>4. AOD</li> </ol>
<p>Mathematical Assessments Summary</p>	<p>Content</p>	<p>Praxis II, Course grades, Mathematics Notebook</p>
	<p>Pedagogy</p>	<p>ADEPT4.0, SLOWS, FEE, Math notebook, Presentation</p>
	<p>Planning and Assessments</p>	<p>CFUP/A, Unit Plans, Math notebook</p>
	<p>Prof Dev/Dispositions</p>	<p>Math notebook, AOD, ADEPT4.0 APS 10</p>
	<p>Teaching</p>	<p>ADEPT4.0, SLOWS, Presentation, FEE</p>



**NCATE**

The Standard of Excellence  
in Teacher Preparation

**TEACHER EDUCATION PROGRAM  
NORTH GREENVILLE UNIVERSITY**

**TO: COOPERATING TEACHERS IN SECONDARY SCHOOLS**

**FROM: Andrew Hodges, Coordinator of Secondary Education**

Thank you for agreeing to work with one of our teacher candidates this semester. I hope you are looking forward to working with our teacher candidates and North Greenville University.

One component of completing the requirements for a teaching certificate in South Carolina is a field placement in your school for hours this semester to complete a field experience. The candidate will be participating in a variety of activities including lesson planning and teaching. The NGU supervising teacher will specify the assignments the candidate must complete. The candidate will also have several evaluations for documentation we would like you to complete. In addition, the NGU supervising teacher will be visiting the candidate in the field experience setting to observe our candidates teaching lessons and to act as a resource for you. If necessary, he will help you complete, or answer, any questions you may have concerning the evaluation form that you will complete at the end of the semester. This form tells us how well our teacher candidates are meeting the objectives of our Conceptual Framework.

Thank you for participating in the preparation of future teachers of quality for the state of South Carolina.

Please call me at 864-977-7987 or email me at [Andrew.Hodges@ngu.edu](mailto:Andrew.Hodges@ngu.edu) if you have any concerns or questions regarding the field experience at NGU.

Andrew Hodges  
Coordinator of Secondary Education  
North Greenville University  
College of Education



Fall 2019

Dear Cooperating Teacher,

Thank you for inviting a North Greenville University student from our Secondary Education Mathematics department into your classroom. The primary purpose of the field experience is for teacher candidates to experience and participate in the Mathematics classroom. They are required to keep an observation journal of learning activities carried out in the class, understand your procedures, curriculum, and planning methods. They should observe for one or two times and then be integrated into the classroom like an assistant. They can be used to tutor, review homework, enter grades, take attendance, introduce a lesson, teach a lesson, prepare assessments, evaluate assessments, and reflect on their impact on grades 9-12 student-learning. Your assigned student learns about the profession by observation, participation, and teaching.

1. The structure of this field experience is to assist you, the cooperating teacher, and to plan and carry out a minimum of (I have highlighted the course associated with this field placement.)  
Two lessons minimum for their Curriculum Development course (EDSE 3290), for 20 hours in your class, please allow them as much class time as possible like going over homework or reviewing for a test, grading papers, other duties.  
or  
Six lessons minimum in their Math Methods (MAED 4310) course, for 30 hours in your class. They are to teach these lessons under your supervision and observation. This is the minimum requirement, but they are free to carry out any number of lessons as you desire.
2. The student is to report the classroom on time and will need your initials on each day's attendance for the total number of hours of participation.
3. Please help the student achieve his or her goals by observing the required lessons, filling out an observation form, aiding in planning and with resources, evaluating the lesson, and making suggestions for improvement of the lesson. Teacher candidates love feedback. If there are any problems or concerns, please contact me as soon as possible. 864-457-2441.

Sincerely yours,

Jill B. Branyon, Ed. D.  
Secondary Education Mathematics Program Coordinator  
North Greenville University  
College of Education  
P.O. Box 1892, Tigerville, SC 29688  
(864) 977-7989 Office      Home: (864) 457-2441  
[jbranyon@ngu.edu](mailto:jbranyon@ngu.edu)

**The Digital Student Teacher Portfolio Assignment** has been revised.

Digital Student Teacher Portfolio Assignment and Rubric

**Revision**

Student Teacher Portfolio

Please include the required items for each section; each item should be free of errors demonstrating your highest quality work and attention to detail. Questions will be answered during the Student Teaching Orientation.

**Digital Student Teaching Notebook**

**Introduction section**

Philosophy of Education

Resume

Copies of Praxis Scores

**Section 1: Domain 1, Instruction**

ADEPT4.0 Lesson w/ Pre and Post Conference and **Reflection**

Domain 1 & 3 checklist, include a copy of all evaluations from student teaching.

(You will do one ADEPT 4.0 lesson in pre-student teaching/methods and one in Student teaching.)

**Section 2: Domain 2, Planning**

*a. Demographic information* from at least four diverse areas tied to a classroom with graphs and explanations

*b. Four or more weeks, full-time plans (showing alignment of standards, objectives, EQ, and assessment on the Planning Matrix)*

*c. The Content-Focused Unit Analysis: See assignment for details*

**d. Reflection** on the planning and use of the demographics in planning unit and full-time plans. Use the Domain 2: Planning with Demographics Reflection

**Section 3: Domain 3, Environment**

Classroom Rules/Managing Student Behavior Plan

**Domain 3 & 4 Video Reflection** on student teaching using the questions provided.

**Section 4: Domain 4, Professionalism**

**Domain 3 & 4 Video Reflection**--Oral Language Rubric is used to assess the video mechanics. Use the questions provided.

List of professional development opportunities/research/memberships (PTO, ILA, NGU Organizations: NCTM, NCTE, ECA, TEA). Write a two-page reflection on how you grew as a professional.

AOD self-assessment: January and April. Looking for growth and appropriate identification of areas for improvement.

AOD by the cooperating teacher: midterm and final

Collaborative effort by COE faculty

Revised Fall 2019

Digital Portfolio Rubric: All products not previously assessed.

Criteria	Exemplary - 4	Proficient -3	Needs Improvement-2	Unsatisfactory - 1
<b>Full-time teaching unit plans</b>	Standards and objectives aligned	Standards and objectives aligned	Standards and objectives aligned	Standards and objectives aligned

	well to instruction and assessment. Learning activities fit students and objectives. Approaches are varied and effective. Materials and technology match student needs. Use of demographics is evident. Sufficient details are given.	well to instruction and assessment. Learning activities fit students and objectives. Approaches are varied and effective. Materials and technology match student needs. Use of demographics is evident.	well to instruction and assessment. Learning activities fit students and objectives. Approaches are varied and effective.	well to instruction and assessment.
<b>Classroom rules and behavior management plan</b>	Expectations are clear. Non-instructional routines are addressed. Consequences are appropriate. Demographics are addressed. Routines are spelled out. The plan has sufficient details.	Expectations are clear. Non-instructional routines are addressed. Consequences are appropriate. Demographics are addressed. Routines are spelled out.	Expectations are clear. Non-instructional routines are addressed. Consequences are appropriate.	Expectations are clear.
<b>Domain 3 &amp; 4 Video Reflection</b>	Use rubric found in Google.			
<b>Oral Language Rubric</b>	Use rubric found in Google.			
<b>List of Professional Development entries</b>	List contains professional development of at least 4 types such as meetings, research, working on teams, and mentoring. Reflection on PD shows insight and understanding. Membership in professional organizations is listed and at least two are given. Candidate seeks our professional Development opportunities.	List contains professional development of at least 4 types such as meetings, research, working on teams, and mentoring. Reflection on PD shows insight and understanding. Membership in professional organizations is listed and at least two are given.	List contains professional development of at least 3 types such as meetings, research, working on teams, and mentoring. Reflection on PD shows insight and understanding. Membership in professional organizations is listed and at least one is given.	List contains professional development of at least 2 types such as meetings, research, working on teams, and mentoring. Reflection on PD shows insight and understanding.
<b>AOD Self-Assessment</b>	Candidate completes the form and lists areas for improvement. Demonstrates improvement over time.	Candidate completes the form and lists areas for improvement.	Candidate completes the form.	Candidate does not turn it in.
<b>Website</b>	Includes all sections, easy to	Includes all sections, easy to	Includes all sections, easy to navigate,	Includes all sections, easy to navigate,

	<p>navigate, includes required items produced in student teaching, free from errors, layout is logical Sends link to supervisor by the due date</p>	<p>navigate, includes all but one or two required items produced in student teaching, has one or two errors, errors, layout is logical, sends link to supervisor no later than one day beyond the due date.</p>	<p>includes most required items produced in student teaching, has some error, sends link to supervisor no more than two days beyond the due date.</p>	<p>includes some required items produced in student teaching, has many errors, Sends link within one week of the due date.</p>
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NGU Lesson Plan Template. NOTE: The ADEPT 4.0 Lesson must be scripted.

Name: \_\_\_\_\_ Grade/Subject: \_\_\_\_\_

Date of Lesson: \_\_\_\_\_

**Lesson Title:**

**State Standard:**

**Learning Objective(s):** The student will be able to:

**Essential Question(s)/Learning Target:**

**Assessment:** How will you know that the students met the objectives (s) of the lesson?

**Things to include:** How will assessments accommodate for the differences in the students? Are the assessments formative or summative? How will you record what they learned?

How would you re-teach this in a different way for those who do not achieve mastery?

**Materials and Supplies/Technologies and Outside Resources:**

**Things to include:** List all necessary items for teacher and students. Give short description including title and author of any books used. Give the web address for any websites used.

**Opening:** Hook; Essential Question/Learning Target

**Things to include:** How will you begin/introduce the lesson? How will prior learning be activated?

**Instructional Input:** This is your actual instruction.

**Modeling:** What will you do to demonstrate what students should know?

**Development of Critical Thinking and Problem Solving:**

Things to include: Develop three or more questions on the upper levels of Bloom's Taxonomy. Identify the level that corresponds to each question and embed these questions into your script.

Question	Level

**Guided Practice:** Opportunity for students to practice the new learning you have modeled Describe the guided practice activity and include ways you will monitor student progress.

List students' accommodations. \* How will students' individual differences in rates of learning, styles of learning, interests, and needs be accommodated? Include activities for the auditory, visual, and kinesthetic learner.

**Closure:** Re-state the Essential Question/Learning Target.  
How will you review your lesson, summarize, and bring closure?

**Independent Practice:** Reinforce or extend the practice to master content/skill.  
This could be homework or it could be an independent assignment done during class, including an assessment.

**\* Types of Accommodation:**

ESOL

Special Education

Resource or inclusion

Physical Handicaps (visual, hearing, physical)

Speech and Language

Learning Disabilities (what areas)

Early Finishers

Gifted Learners

**Reflection:** *A reflection is written after each lesson plan is taught. See the written lesson plan rubric for the content requirements of the reflection. The reflection is due within 24 hours of completing the lesson.*

**Lesson Plans are submitted to the supervisor and cooperating teacher at least 72 hours before teaching. You will receive feedback on the plan. The corrected copy should be available to the supervisor and cooperating teacher before the lesson (a paper copy).**



## Written Lesson Plan Rubric      Fall 2019

	<b>Exemplary (4.000 pts)</b>	<b>Proficient (3.000 pts)</b>	<b>Needs Improvement (2.000 pts)</b>	<b>Unsatisfactory (1.000 pt)</b>
	Always 100%	Often 70-99%	Sometimes 40-69%	Rarely 0-39%
<b>State Standards (1.000, 8%)</b>	Lesson plan contains addressed standards. Standards are appropriate for the grade level and accommodate the needs, interests, and abilities of the students.	Lesson plan may not clearly indicate the standards addressed. Some standards may not be appropriate for the grade level or may not accommodate the needs, interests, and abilities of the students.	Plans do not indicate standards addressed, or they address standards that are inappropriate for the grade level and students' interests and abilities.	Plans do not indicate a state standard.
<b>Learning Objectives and Anticipatory Set (1.000, 8%)</b>	Plans relate the objectives, instruction, and assessment to students' needs, interests, and abilities. Plans show the alignment of instruction and assessment activities to objectives based on curriculum standards.  The hook is evident and aligned to standards and objectives. It is engaging and captures student interest.	Plans may not clearly relate objectives, instruction, and assessment to students' needs, interests, and abilities. Instruction and assessment activities are not clearly aligned to objectives based on curriculum standards.  The hook is evident and aligned to either the standards or objectives, but not both. It is engaging and captures student interest.	The relationship of objectives, instruction, and assessment to students' needs, interests, and abilities is very limited. Alignment of instruction and assessment activities to each other and/or to objectives based on curriculum standards is very limited. A hook is evident but lacks alignment to standards and objectives. It captures student interest.	Plans do not indicate learning objectives. There is no evidence of a hook.
<b>Materials (1.000, 8%)</b>	Materials used go beyond the textbook to other sources to ensure comprehensive and accurate presentation of content. Resources, materials, and technologies used are chosen to present information from a variety of cultural perspectives and in a variety of formats to meet learners' needs and abilities. Materials used are age-	Materials used go beyond the textbook to other sources but are not comprehensive in the presentation of content. Some resources, materials, and technologies used are chosen to present information from a variety of cultural perspectives. Some resources, materials, and technologies present information in a variety	Materials used may go beyond the textbook to other sources but are not comprehensive or may present some inaccurate content information. Resources, materials, and technologies used are limited in presenting information from a variety of cultural perspectives. Few resources and materials meet learners' needs and	Materials used are not developmentally appropriate or accurate and are limited.

	<p>appropriate and include a minimum of 2 of the following:</p> <ul style="list-style-type: none"> <li>Audiovisual</li> <li>Multimedia</li> <li>Online services</li> <li>Texts representing various perspectives and genres</li> <li>Additional resources for learning centers</li> <li>Manipulatives</li> </ul>	<p>of formats to meet learners' needs and abilities.</p> <p>Materials used are age-appropriate but include only one of the following:</p> <ul style="list-style-type: none"> <li>Audiovisual</li> <li>Multimedia</li> <li>Online services</li> <li>Texts representing various perspectives and genres</li> <li>Additional resources for learning centers</li> <li>Manipulatives</li> </ul>	<p>abilities.</p> <p>Materials used are accurate but do not go beyond the textbook.</p> <p>No provision for additional center materials.</p>	
<p><b>Teaching: Activities &amp; Procedures (3.000, 25%)</b></p>	<p>Plans for instruction indicate how information about students impacts the implementation and evaluation of instruction by describing the specific accommodations to be made.</p> <p>Instructional strategies used accommodate differences in rates of learning and styles.</p> <p>Plans build on students' prior learning and development.</p> <p>Plans provide for integration of content across disciplines in instructional activities.</p> <p>Manipulatives were used to promote child understanding.</p>	<p>Some accommodations are made in the implementation of instruction based on information about students.</p> <p>Some instructional strategies used accommodate differences in rates of learning and styles.</p> <p>Portions of plans build on students' prior learning and development. There is some evidence of integration and content across disciplines in instructional activities.</p> <p>Manipulatives were not used.</p>	<p>Few accommodations were made in the implementation of instruction based on information about students.</p> <p>Instructional strategies are limited in accommodating the differences in rates of learning and styles.</p> <p>Activation of students' prior learning and development are limited or missing.</p> <p>Few instructional activities provide for integration of content across disciplines.</p>	<p>Activities are not aligned with the lesson content.</p> <p>Procedures that enhance and facilitate student learning are not in place.</p>
<p><b>Questioning &amp; Higher Order Thinking (2.000, 16%)</b></p>	<p>Plans provide students an opportunity to develop critical thinking and problem-solving skills.</p> <p>Activities and assessments address various levels of Bloom's taxonomy, but</p>	<p>Plans provide limited opportunities for students to develop critical thinking and problem-solving skills.</p> <p>Activities and assessments only address two levels of Bloom's taxonomy, or focus on lower levels.</p>	<p>Instructional activities only promote single solution problems.</p> <p>Activities and assessments only address the lowest level of Bloom's taxonomy.</p>	<p>Questioning at higher levels is omitted. Critical thinking is not developed.</p>

	focus on at least three of the higher levels.			
<b>Closure (1.000, 8%)</b>	The closure of the lesson is easily identifiable and includes a summing activity that checks for student understanding. The EQ is re-stated and addressed.	The closure of the lesson is easily identifiable but does not include a summing activity that checks for student understanding. The EQ is re-stated and addressed.	The closure of the lesson is not identifiable and does not include a summing activity that checks for student understanding. The EQ is re-stated but not addressed.	Closure is not evident.
<b>Assessment (2.000, 16%)</b>	Assessment is clearly aligned to the standards, objectives, and instruction. Assessment strategies are appropriate for students' ability and developmental levels. Assessment is clearly related to students' needs, interests, and abilities. Assessment has a student activity, a proper recording mechanism, and a plan for re-teaching.	Alignment of assessment to standards, objectives, and instruction is not complete. Some assessment strategies are inappropriate for students' ability and developmental levels. Parts of assessment are related to students' needs, interests, and abilities. Assessment has two of the following: a student activity, a proper recording mechanism, and a plan for re-teaching.	Assessment is not clearly aligned to the standards, objectives, and instruction. Assessment strategies are inappropriate for students' ability and developmental levels. There is limited evidence that the assessment is related to students' needs, interests, and abilities. Assessment has only one of the following: a student activity, a proper recording mechanism, and a plan for re-teaching.	Assessment is not aligned to the standards, objectives, or instruction.
<b>Reflection (1.000, 8%)</b>	Reflection addresses areas of improvement and the areas that were good. Thoughtful and meaningful comments are given for changes in the next lessons.	Reflection mentions areas for improvement and the areas that were good, but does not accurately address how areas of improvement can be addressed.	Reflection mentions areas for improvement but does not address what went well and how areas of improvement can be addressed.	No reflection.

## **Secondary Mathematics Education Lesson Plan and Unit Plan Addendum.**

1. Research used to plan rich mathematical learning experiences. NCTM 3b.
2. Plan lessons that incorporate a variety of strategies and mathematics-specific technologies build Students' conceptual understandings and procedural proficiencies. NCTM 3c.
3. Create inquiry and student discourse where students have opportunities to communicate and make connections in mathematics, other content areas, everyday life, and the workplace. NCTM 3d
4. Select high-quality tasks, identify key mathematical ideas, and employ a wide range of questioning. NCTM 3e.
5. Plan, select, and implement formative and summative assessment to inform instruction by reflection on mathematical proficiencies for all students. NCTM 3f.
6. Plan and create developmentally appropriate, sequential, and challenging learning opportunities. NCTM 4b.
7. Apply mathematical content and pedagogical knowledge to select and use instructional tools such as manipulatives, physical models, drawing, virtual environments, spreadsheets, presentation tools, and mathematics- specific tools recognizing the insights that might be gained and possible limitations of tools. (List the tool and state advantages and limitations to the tool). NCTM 4e
8. What is your math history focus? Include timeline, contributions of various cultures, contributions of mathematicians, and the significance for today. Connect history to student understanding.

Rubric: Mathematics Secondary Education Extension for Lesson Plans

Criteria	Exemplary -4	Proficient-3	Developing-2	Beginning-1
1. Research used to plan rich mathematical learning experiences. NCTM 3b	LP includes research such as demographics, best practice for differentiation, best practices, rich learning experiences, goes beyond the textbook and worksheets.	LP includes research such as demographics, best practice for differentiation, best practices, and rich learning experiences.	LP includes research such as demographics, best practice for differentiation, and rich learning experiences.	LP has little research, and math experiences are not rich,
2. Plan lessons that incorporate a variety of strategies and mathematics-specific technologies, build students' conceptual understandings and procedural proficiencies. NCTM 3c.	Plans a variety of rich instructional strategies, uses mathematics-specific technology. Builds conceptual knowledge. Improves procedural proficiencies. Students are highly engaged using strategies and tools.	Plans a variety of rich instructional strategies, uses mathematics-specific technology. Builds conceptual knowledge. Improves procedural proficiencies.	Plans a variety of rich instructional strategies, uses mathematics-specific technology. Builds conceptual knowledge.	Plans a variety of rich instructional strategies, uses mathematics-specific technology.
3. Create inquiry and student discourse where students have opportunities to communicate and make connections in mathematics, other content areas, everyday life, and the workplace. NCTM 3d	Plans inquiries and investigations. Includes time for student discourse. Students communicate their thinking. Students communicate their connections. Students move into high levels of engagement and conclusions.	Plans inquiries and investigations. Includes time for student discourse. Students communicate their thinking.	Plans inquiries and investigations. Includes adequate time for student discourse.	Plans some inquiries and investigations. Includes a little time for student discourse.
4. Select high-quality tasks, identify key mathematical ideas, and employ a wide range of questioning. NCTM 3e.	Plan includes high-quality tasks and projects. Key mathematical ideas are included. Questioning is seen in all parts of the lesson plan. Questioning leads students to draw conclusions. Questions lead to student discourse.	Plan includes high-quality tasks and projects. Key mathematical ideas are included. Questioning is seen in all parts of the lesson plan. Questioning leads students to draw conclusions.	Plan includes high-quality tasks and projects. Key mathematical ideas are included. Questioning is seen in all parts of the lesson plan.	Plan includes one high-quality task or project. A few key mathematical ideas are included.
5. Plan, select, and implement formative and summative assessment to inform instruction by reflection on mathematical	Plans include assessments. Plans include pre-assessment and post-assessment. Plans show alignment of SLO to assessment.	Plans include assessments. Plans include pre-assessment and post-assessment. Plans show	Plans include assessments. Plans includes pre-assessment and post-assessment.	Plans include one assessment.

proficiencies for all students. NCTM 3f.	Plans are modified based on assessments.	alignment of SLO to assessment.		
6. Plan and create developmentally appropriate, sequential, and challenging learning opportunities. NCTM 4b.	Lesson plans are developmentally appropriate. Plans are sequential. Plans are challenging. Plans include options for creativity and exploration.	Lesson plans are developmentally appropriate. Plans are sequential. Plans are challenging.	Lesson plans are developmentally appropriate. Plans are sequential.	Lesson plans are developmentally appropriate.
7. Apply mathematical content and pedagogical knowledge to select and use instructional tools recognizing the insights that might be gained and possible limitations of tools. (List the tool and state advantages and limitations to the tool). NCTM 4e	Lesson plans include appropriate instructional tools. Plan demonstrates the best use of the tools. Plan shows any possible limitations to the students. Candidate selects multiple tools to differentiate learning.	Lesson plans include appropriate instructional tools. Plan demonstrates the best use of the tools. Plan shows any possible limitations to the students.	Lesson plans include appropriate instructional tools. Plan demonstrates the best use of the tools.	Lesson plans include appropriate instructional tools.
8. Plan includes mathematical history and mathematicians.	Plan includes significant contributions of cultural groups. Plan includes historical placement of content. Plan includes contributions of mathematicians. Plan shows how the content has evolved.	Plan includes significant contributions of cultural groups. Plan includes historical placement of content. Plan includes contributions of mathematicians.	Plan includes significant contributions of cultural groups. Plan includes historical placement of content.	Plan includes historical placement of content.

## **Unit Plans: Secondary Mathematics Education**

You will plan several one-week units. The units will contain several parts, which you will complete on the unit plan template. Open the template so that it appears in your documents in a shared google folder.

Part 1: **Unit Overview:** Using an approved secondary mathematics textbook for the subject and grade level where you are carrying out your field experience and other resources. Outline the unit. To outline a unit, you list three or more overarching standards and objectives to be covered in the unit. You give an overview of the topics and important mathematics in the unit. You list three to six Essential Questions or problems to be answered in the unit. You create a timeline for the unit, including pre-test, lessons planned, and post-test. The goal of the unit is to see how mathematical ideas and concepts build over a period of time and connect to each other.

Part 2: **Pre- and Post-test:** Using the standards, objectives, and essential questions or problems, create a pre-test and a post-test that is aligned to the standards, objectives, and essential knowledge. The tests should mirror each other in terms of types of problems and level of difficulty.

Part 3: **Four Lesson outlines:** Create a minimum of 4 lessons that connect and build upon each other. You will use the Unit plan matrix to map out the lesson outlines.

**Unit Plan Assessment Rubric:**

Section1: Unit Overview	NCTM	Mastery-4	Accomplished-3	Developing-2	Beginning-1
Standards and objectives are given.	3a	Standards for SC are listed in detail, and clear objectives are given to cover all the standards.	Standards are listed in detail, and some objectives are listed.	Standards are listed but not in detail, and some objectives are listed, but may not connect to standards.	Standards or objectives are incomplete or missing.
Essential Questions or problems are listed.	3e	The Essential Questions or problems are significant, connect well to unit, and include authentic contexts.	The Essential Questions or problems are significant and connect well to unit.	The Essential Questions or problems are significant.	The Essential Questions or problems are not significant or connect to the unit.
Timeline shows connections.	3a	The timeline is appropriate, demonstrates connections, and is well paced for the level of students targeted.	The timeline is appropriate and demonstrates connections.	The timeline is appropriate.	The timeline is not appropriate or does not show connections or is not well paced.
<b>Section 2: Assessments</b>					
Assessments are related to the objectives and essential questions or problems.	3f	The assessments are related to the objectives of the unit, measure important mathematics, and pre- and post-test match closely. Alignment is clearly highlighted.	The assessments are related to the objectives of the unit, and pre- and post-test match closely.	The assessments match closely the pre- and post-test.	The assessments do not measure objectives or match closely or measure important mathematics.
Assessments include mathematical practices.	2f	Assessments include at least four mathematical practices.	Assessments include at least three mathematical practices.	Assessments include at least two mathematical practices.	Assessments include at least one mathematical practices.
<b>Section 3: Lessons 1-4</b>					
Lessons are written in the matrix.	3c	The lessons follow the detailed mathematical lesson template, include all materials to be used in the lesson, and provide sufficient detail to follow.	The lessons follow the template and include materials used in the lesson, but may lack detail.	The lessons follow the template, but may not include materials and may lack sufficient detail to follow the lesson.	The lessons follow the template, but leave out sections, details, and/or materials used.
Lessons include mathematical practices.	2f	Lessons include some mathematical practices, includes at least four over the eight lessons of the unit.	Lessons include some mathematical practices, includes at least three over the eight lessons of the unit.	Lessons include some mathematical practices, includes at least two over the eight lessons of the unit.	Lessons include some mathematical practices, includes at least one over the eight lessons of the unit.
Lessons include the appropriate use of technologies, etc.	4e	Lessons include technologies, manipulatives, and hands-on strategies that are varied,	Lessons include technologies, manipulatives, and hands-on strategies that	Lessons include technologies, manipulatives, and hands-	Lessons do not include technologies, manipulatives, or hands-on strategies that



NCTM 6.1 (03)		appropriate, and enhance learning.	are varied and enhance learning.	on strategies that enhance learning.	are varied, appropriate, and enhance learning.
Lessons include historical notes.	4c	Lessons include historical notes that create interest, are appropriate, and add depth to the lessons. There are more than two notes in the eight lessons. Includes a variety of cultural perspectives.	Lessons include historical notes that create interest, are appropriate, and add depth to the lessons. There are two notes in the eight lessons. Includes a variety of cultural perspectives.	Lessons include historical notes that create interest, are appropriate, and add depth to the lessons. There is one historical note in the eight lessons.	Lessons do not include appropriate historical notes.
Lesson include formative assessments.	3g	Lessons include a variety of formative assessments across the lessons such as bell ringers, quizzes, student demonstrations, exit slips, and student discourse.	Lessons include some variety of formative assessments across the lessons such as bell ringers, quizzes, student demonstrations, exit slips, and student discourse.	Lessons include at least one type of formative assessment across the lessons such as bell ringers, quizzes, student demonstrations, exit slips, and student discourse.	Lessons does not include a formative assessment across the lessons such as bell ringers, quizzes, student demonstrations, exit slips, and student discourse.

**Revised FA2019**

Candidate: \_\_\_\_\_ Unit Title: \_\_\_\_\_

Content Area: \_\_\_\_\_ Cooperating teacher: \_\_\_\_\_

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
SCCCR standards					
Essential Questions					
Objective					
Introduction					
Learning activities					
Assessments					
Technology					
Accommodations					
Closure					
Higher-order thinking or real contexts/application					
Historical Focus					
Math Specific Technology					
Questioning on a variety of levels.					

Attach any relevant materials.



**FIELD EXPERIENCE: Secondary Education**

**COURSE NAME & Number** \_\_\_\_\_  
**Name** \_\_\_\_\_ **Semester:** \_\_\_\_\_

**School** \_\_\_\_\_ **Grade** \_\_\_\_\_

**Cooperating Teacher** \_\_\_\_\_

**ATTENDANCE LOG**

Week No.	Day	Time		Teacher's Initials
		In	Out	

**Total Number of Hours** \_\_\_\_\_

\_\_\_\_\_  
**Cooperating Teacher's Signature**

North Greenville University  
College of Education

\_\_\_\_\_  
**Student Signature**

**North Greenville University Assessment of Dispositions: Field Experience/Student Teaching 4.0 Aligned**

Candidate \_\_\_\_\_ ID # \_\_\_\_\_ Semester \_\_\_\_\_ Major \_\_\_\_\_

Please rate 1-4: 1 = unsatisfactory; 2 = needs improvement; 3 = proficient; 4 = exemplary; by writing the appropriate number in the box. Circle indicators that are weak for student and/or make specific comments below. Use rubric to assess.

**1. EFFECTIVE PRACTITIONER**

**A. Exhibits Professional Attitude**

*Indicators: Is dependable, dresses professionally, is punctual, prepared, attends classes, professional development meetings, etc., meets deadlines, brings artifacts (student work) when requested, and possesses teacher self-efficacy.*

**B. Values Communication**

*Indicators: Has good communication skills, uses correct grammar, teaches correct content, is enthusiastic, positively engages students in learning, and utilizes student achievement data to address strengths and weaknesses of students and guide instructional decisions.*

**C. Demonstrates a Positive Attitude toward Teaching/Students**

*Indicators: Demonstrates respect towards faculty/administrators, practices collaboration with cooperating teacher and mentor, attempts to implement new learning in the classroom based on professional development meetings, has a positive attitude towards supervision, shows enthusiasm in class, speaks positively with students.*

**D. Displays a Positive Attitude toward the Profession, Colleagues, and Authority**

*Indicators: Demonstrates integrity, is flexible, practices collaboration, demonstrates teamwork, uses self-assessment and input from cooperating teacher and mentor to implement new learning, and supports cooperating teacher, mentor, and administrators.*

**2. CARING LEADER**

**A. Promotes Nurturing and Kindness**

*Indicators: Uses appropriate tone of voice, sensitive to students, is patient, practices active listening, goes above and beyond to help others.*

**B. Values Relationships**

*Indicators: Is loyal, respectful, trustworthy, encouraging, not critical, shows concern for the well-being of colleagues and students. Keeps a confidence, team player, able to work with others, cheerful, positive and encouraging, helpful, giving.*

**C. Creates a Nurturing Environment**

*Indicators: Is prepared to engage in learning, includes students' ideas in the lesson, is professional in the use of electronics, respects the ideas of colleagues and students, celebrates learning with students.*

**3. LIFELONG LEARNER**

**A. Values Professional Development**

*Indicators: Has the potential for professional growth, develops in-depth pedagogical knowledge, selects specific activities, content knowledge, or pedagogical skills to enhance and improve teaching proficiency, accepts leadership responsibilities and/or assists in contributing to a safe and orderly school environment, reads research, builds knowledge beyond the textbook, joins professional organizations.*

**B. Takes Initiative**

*Indicators: Exhibits leadership potential, demonstrates maturity, accepts responsibilities contributing to school improvement, actively supports school activities and events, uses sound judgment and common sense, produces high-quality work, demonstrates leadership and initiative in the classroom.*

**C. Practices Reflective Inquiry**

*Indicators: Practices self-reflection/assessment, writes in-depth reflections, makes thoughtful and accurate assessments of his/her lessons' effectiveness as evidenced by self-reflection after observations, offers ideas of specific actions to improve teaching, reads with critical understanding, identifies consequences of one's actions, understands the effects of decisions on colleagues and students.*

COMMENTS: (Use the back if necessary.)

**TOTAL SCORE**

Signature: \_\_\_\_\_ Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Instructor of: \_\_\_\_\_  
 Subject Area \_\_\_\_\_ Course Title and Number \_\_\_\_\_

(Revised SP 2019)

The target area for junior level candidates is 3.0 average or 30 points, and the target for the senior level is 3.5 or higher.

<b>I. The Effective Practitioner</b>					
<b>Disposition</b>		<b>Exemplary-4</b>	<b>Proficient-3</b>	<b>Needs Improvement-2</b>	<b>Unsatisfactory-1</b>
<b>IA. Exhibits a Professional Attitude</b> CAEP1.1, COE 2A, APS10, InT9	Is positively engaged in the learning experience, is responsible, dependable, punctual, prepared, produces high-quality work, teaches correct content, effectively plans and implements lessons, meets deadlines, possesses confidence and self-efficacy, takes responsibility for own actions, exhibits professional dress, brings artifacts (student work) when requested.	Exemplary 90- 100%	Often 60-89%	Sometimes 30-59%	Rarely 0-29%
<b>IB. Communicates Effectively</b> CAEP 1.1, COE 1B, APS 5, InT6	Has good communication skills, uses correct grammar-- written and spoken, is a good listener, uses appropriate tone of voice and word choices, is patient with others.	Exemplary 90- 100%	Often 60-89%	Sometimes 30-59%	Rarely 0-29%
<b>IC. Demonstrates a Positive Attitude toward Teaching and Students</b> CAEP 1.1 COE 2B, APS 8, InT4, DIV 2B	Positively engages students in learning, speaks positively with students, demonstrates enthusiasm in class, demonstrates respect and practices collaboration with cooperating teacher and mentor, has a positive attitude towards supervision, utilizes student achievement data to address strengths and weaknesses of students and guide instructional decisions, attempts to implement new learning in the classroom based on professional development meetings, demonstrates respect towards faculty/administrators.	Exemplary 90- 100%	Often 60-89%	Sometimes 30-59%	Rarely 0-29%
<b>ID. Displays a Positive Attitude toward the Profession, Colleagues, and Authority</b>  CAEP 1.1 COE 2D, APS 10, InT10	Demonstrates integrity, loyalty, self-control, teamwork, is ethical, flexible, and cooperative, practices collaboration, uses self-assessment, personal reflection, and input from cooperating teacher and mentor to implement new learning, supports cooperating teacher, mentor, faculty, and administrators, speaks positively about the program, joins professional organizations.	Exemplary 90- 100%	Often 60-89%	Sometimes 30-59%	Rarely 0-29%
<b>II. Caring Leader</b>					
<b>Disposition</b>		<b>Exemplary-4</b>	<b>Proficient-3</b>	<b>Needs Improvement-2</b>	<b>Unsatisfactory-1</b>
<b>IIA. Promotes Nurturing and Kindness</b> CAEP 1.1, COE2C, APS 8, InT5, DIV 2C	Is respectful, patient, kind, sensitive to student needs, interacts well with others, uses appropriate tone of voice and word choices, finds ways to praise students, practices active listening.	Exemplary 90- 100%	Often 60-89%	Sometimes 30-59%	Rarely 0-29%
<b>IIB. Values Relationships</b> CAEP 1.1, COE 2D, APS 10, InT10, DIV 2D	Is respectful, trustworthy, encouraging, loyal, shows concern for the well-being of students and colleagues. Keepsaconfidence, able to work with others, team player, not critical, cheerful, positive, encouraging, helpful, giving.	Exemplary 90- 100%	Often 60-89%	Sometimes 30-59%	Rarely 0-29%

<b>IIC. Creates an Environment Conducive for Learning</b> CAEP 1.1, COE 2C, APS 8, InT5	Is prepared to engage in learning, effectively plans and implements lessons, effectively manages student behavior and time on task, encourages students, respects the ideas of students and includes in the lessons, celebrates learning with students, is professional in the use of electronics, shares knowledge with others.	<b>Exemplary</b> 90- 100%	<b>Often</b> 60-89%	<b>Sometimes</b> 30-59%	<b>Rarely</b> 0-29%
<b>III. Lifelong Learner</b>					
<b>Disposition</b>		<b>Exemplary-4</b>	<b>Proficient-3</b>	<b>Needs Improvement-2</b>	<b>Unsatisfactory-1</b>
<b>IIIA. Engages in Professional Development</b> CAEP 1.1, COE 3A, APS 10, InT 9	Engages positively in learning opportunities, has the potential for professional growth, develops in-depth pedagogical knowledge, selects specific activities, content knowledge, or pedagogical skills to enhance and improve teaching proficiency, accepts leadership responsibilities and/or assists in contributing to a safe and orderly school environment, builds knowledge beyond the textbook, reads research, joins professional organizations.	<b>Exemplary</b> 90- 100%	<b>Often</b> 60-89%	<b>Sometimes</b> 30-59%	<b>Rarely</b> 0-29%
<b>III B. Practices Reflective Inquiry</b> CAEP 1.1 COE 3C, APS 7, InT 8 DIV 3C	Practices self-reflection/assessment, writes in-depth reflections, makes thoughtful and accurate assessments of his/her lessons' effectiveness as evidenced by self-reflection after observations, offers ideas of specific actions to improve teaching, carries out corrections suggested by instructors, reads with critical understanding, identifies consequences of actions, understands the effects of decisions on colleagues and students.	<b>Exemplary</b> 90- 100%	<b>Often</b> 60-89%	<b>Sometimes</b> 30-59%	<b>Rarely</b> 0-29%
<b>IIIC. Personal Initiative and Leadership</b> CAEP 1.1, COE 2A, APS10, InT 10	Exhibits leadership potential as well as demonstrates leadership, ethical behavior, maturity, and initiative in the classroom, accepts responsibilities in classroom and for school improvement, uses sound judgement and common sense, is organized and prepared, produces high quality work, supports school activities and events.	<b>Exemplary</b> 90- 100%	<b>Often</b> 60-89%	<b>Sometimes</b> 30-59%	<b>Rarely</b> 0-29%

The Assessment of Dispositions: Field Experience: Mathematics Secondary Education Rubric

<b>1. Effective Practitioner</b>				
<b>Disposition NCTM 2003</b>	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
1A. Exhibits a Professional Attitude	<i>Factors: Confident, responsible, appropriate dress, punctual, meets deadlines, prepared, possesses self-efficacy, takes responsibility for own actions</i>	<i>Confident, responsible, appropriate dress, punctual, meets deadlines, prepared, possesses self-efficacy,</i>	<i>Confident, responsible, appropriate dress, punctual, meets deadlines, prepared,</i>	<i>Confident, responsible, appropriate dress, punctual, meets deadlines,</i>
1B. Communication and teaching (NCTM 3.1)	<i>Factors: Communicates content enthusiastically, uses correct grammar, has good communication skills, is able to relate and communicate with students, uses student discourse for higher learning, correct content, communicates mathematically, Uses multiple representations for mathematical understanding</i>	<i>Uses correct grammar, has good communication skills, is able to relate and communicate with students, uses student discourse for higher learning, correct content, communicates mathematically, Uses multiple representations for mathematical understanding</i>	<i>Uses correct grammar is able to relate and communicate with students, uses student discourse for higher learning, correct content, communicates mathematically, Uses multiple representations for mathematical understanding</i>	<i>Uses correct grammar, is able to relate and communicate with students, uses student discourse for higher learning, correct content, communicates mathematically,</i>
1C. Positive attitude towards teaching and students (NCTM 8.1)	<i>Factors: Exhibits enthusiasm, meets the needs of all learners, demonstrates patience with students, uses a variety of teaching strategies, incorporates contextual and stimulating content, uses internet resources</i>	<i>Meets the needs of all learners, demonstrates patience with students, uses a variety of teaching strategies, incorporates contextual and stimulating content, uses internet resources that</i>	<i>Meets the needs of all learners, demonstrates patience with students, uses a variety of teaching strategies, uses stimulating content, uses internet resources that stimulate student questions, demonstrates the belief that all students can learn.</i>	<i>Meets the needs of all learners, demonstrates patience with students, uses a variety of teaching strategies, uses internet resources that go stimulate student questions, demonstrates</i>



	<i>that stimulate student questions, demonstrates the belief that all students can learn.</i>	<i>stimulate student questions, demonstrates the belief that all students can learn.</i>		<i>the belief that all students can learn.</i>
1D. Positive attitude towards profession, colleagues, and innovation (NCTM 7.6)	<i>Factors: Engages in teamwork, promotes the school, ethical, demonstrates a desire to keep abreast of latest technology and research, tries to incorporate technology and innovations such as online resources, interactive notebooks, and concrete models, seeks out a mentor and learns from others, is fluent with technology.</i>	<i>Engages in teamwork, promotes the school, ethical, demonstrates a desire to keep abreast of latest technology and research, tries to incorporate technology and innovations such as online resources, interactive notebooks, and concrete models, seeks out a mentor and learns from others.</i>	<i>Engages in teamwork, promotes the school, ethical, demonstrates a desire to keep abreast of latest technology and research, tries to incorporate technology and innovations such as online resources, interactive notebooks, and concrete models,</i>	<i>Engages in teamwork, promotes the school, ethical, tries to incorporate technology and innovations such as online resources, interactive notebooks, and concrete models.</i>
<b>2. Caring Leader</b>				
2A. Promotes cooperative learning with understanding (NCTM 7.4)	<i>Factors: Effective tone of voice and word choices, teaches students to collaborate, uses inquiry-based approaches, seeks student mastery of content with understanding, works towards concept mastery and making connections across the curriculum,</i>	<i>Effective tone of voice and word choices, teaches students to collaborate, uses inquiry-based approaches, seeks student mastery of content with understanding, works towards concept mastery,</i>	<i>Effective tone of voice and word choices, teaches students to collaborate, seeks student mastery of content with understanding, works towards concept mastery,</i>	<i>Effective tone of voice and word choices, teaches students to collaborate, seeks student mastery of content with understanding,</i>
2B. Values Relationships (NCTM 7.1)	<i>Factors: Keeps a confidence and privacy, shows concern for others' well-being, loyal,</i>	<i>Keeps a confidence and privacy, shows concern for others' well-</i>	<i>Keeps a confidence and privacy, shows concern for others' well-being, loyal, respectful,</i>	<i>Keeps a confidence and privacy, loyal, respectful, trustworthy,</i>

	<i>respectful, trustworthy, treats all students equitably, uses strategies to engage all student in learning, finds ways to accommodate learning needs.</i>	<i>being, loyal, respectful, trustworthy, treats all students equitably, uses strategies to engage all student in learning</i>	<i>trustworthy, treats all students equitably,</i>	<i>treats all students equitably,</i>
2C. Creates a nurturing environment (NCTM 7.1)	<i>Factors: Includes all learners (promoting an appreciation for others), creates a warm learning space, ensures that students are free from harassment, respects diverse learners, offers a variety of resources for student use, provides opportunities to explore math-specific technology, features stimulating question or problem of the week, uses historical notations in the room, makes learning public.</i>	<i>Includes all learners (promoting an appreciation for others), creates a warm learning space, ensures that students are free from harassment, respects diverse learners, offers a variety of resources for student use, provides opportunities to explore math-specific technology, features stimulating question or problem of the week, uses historical notations in the room,</i>	<i>Includes all learners (promoting an appreciation for others), creates a warm learning space, ensures that students are free from harassment, respects diverse learners, offers a variety of resources for student use, provides opportunities to explore math-specific technology, features stimulating question or problem of the week,</i>	<i>Includes all learners (promoting an appreciation for others), creates a warm learning space, ensures that students are free from harassment, respects diverse learners, offers a variety of resources for student use, provides opportunities to explore math-specific technology,</i>
<b>3. Lifelong Learner</b>				
3A. Engages in Professional Development (NCTM 8.6)	<i>Factors: Engages positively in learning opportunities, attends grade level meetings or faculty meetings, asks questions about methods, planning, or assessment,</i>	<i>Engages positively in learning opportunities, attends grade level meetings or faculty meetings, asks questions about methods,</i>	<i>Engages positively in learning opportunities, attends grade level meetings or faculty meetings, asks questions about methods, planning, or assessment, reads and uses research in planning, displays</i>	<i>Engages positively in learning opportunities, attends grade level meetings or faculty meetings, asks questions about methods,</i>

	<i>reads and uses research in planning, displays teamwork and cooperation, joins professional organizations, attends professional development seminars.</i>	<i>planning, or assessment, reads and uses research in planning, displays teamwork and cooperation, joins professional organizations.</i>	<i>teamwork and cooperation.</i>	<i>planning, or assessment, reads and uses research in planning.</i>
3B. Assessment analysis (NCTM 7.5)	<i>Factors: Uses daily assessments to inform instruction, analyzes students' performances, uses a variety of assessment approaches, assessments are aligned with standards.</i>	<i>Uses daily assessments to inform instruction, analyzes students' performances, uses a variety of assessment approaches.</i>	<i>Uses daily assessments to inform instruction, analyzes students' performances.</i>	<i>Uses daily assessments to inform instruction.</i>
3C. Practices Reflective Inquiry (NCTM 7.4)	<i>Factors: Understands the effects of decisions on students, reads research with a critical understanding, knows how to pinpoint student learning needs, able to impact student learning, understands consequences of actions on students, corrects misunderstandings quickly.</i>	<i>Understands the effects of decisions on students, reads research with a critical understanding, knows how to pinpoint student learning needs, able to impact student learning, understands consequences of actions on students.</i>	<i>Understands the effects of decisions on students, reads research with a critical understanding, knows how to pinpoint student learning needs, able to impact student learning.</i>	<i>Understands the effects of decisions on students, reads research with a critical understanding, able to impact student learning.</i>

**North Greenville University: Field Experience Evaluation: Secondary Education: Mathematics**

Student: .....Date.....Topic.....

Indicator	Exemplary 4	Proficient 3	Developing 2	Beginning 1	Comments NCTM
<b><u>I. EFFECTIVE PRACTITIONER</u></b>					
a. Uses effective <b>communication and questioning</b> in <b>Mathematics</b>					3d
b. Include appropriate <b>Mathematical standards</b>					3a
c. Uses a <b>variety of instructional strategies</b> to reach all learners.					3c
d. Utilizes a variety of concrete <b>manipulatives, online programs, and technologies to teach concepts.</b>					4e
e. Uses <b>contextual and real-world</b> problems to <b>create student discourse</b> and to reach and accommodate all learners.					3d
f. Uses SLOs and <b>essential question or problems aligned to content standards.</b>					3a
<b><u>II. CARING LEADER</u></b>					
a. Displays a <b>responsiveness</b> to student needs and shows <b>equity</b>					4d
b. Engages students in <b>higher order thinking skills, problem-solving, reasoning and proof</b> and high-quality tasks in mathematics.					3e
<b><u>III. LIFE LONG LEARNER</u></b>					
a. <b>Impacts student learning</b> by checking for understanding and assessing learning and monitoring student progress.					3g
b. Demonstrates <b>use of assessment data to inform instruction by reflecting on mathematical proficiencies.</b>					3f

Cooperating Teacher:.....Total (40) .....

Supervising Teacher/Teacher of Record:..... (Fall 2019)

**Please make suggestions for the improvement of future lessons. Candidates value this input. Feel free to use the back.**

**Field Experience Secondary Mathematics Education Rubric**

<b>Indicator</b>	<b>Exemplary-4</b>	<b>Proficient-3</b>	<b>Developing -2</b>	<b>Beginning - 1</b>	<b>NCTM</b>
<b><u>I. EFFECTIVE PRACTITIONER</u></b>	<b><u>Candidates:</u></b>				
a. Uses effective <b>communication and questioning in Mathematics</b>	Communicate mathematics and gives students opportunities to communicate their mathematical thinking, uses questioning to lead students to make connections among ideas, other content areas, everyday life, and workplace. Include student interests and cultures in discourse.	Communicate mathematics and gives students opportunities to communicate their mathematical thinking, uses questioning to lead students to make connections among ideas, other content areas, everyday life, and workplace.	Communicate mathematics and gives students opportunities to communicate their mathematical thinking, uses questioning to lead students to make connections among ideas, other content areas,	Communicate mathematics and gives students opportunities to communicate their mathematical thinking	3d
b. Include appropriate <b>Mathematical standards</b>	Communicates appropriate standards, demonstrates knowledge of standards, their relationship to student learning, building within and across mathematical domains. Knows how to scaffold and integrate standards across domains.	Communicates appropriate standards, demonstrates knowledge of standards, their relationship to student learning, building within and across mathematical domains.	Communicates appropriate standards, demonstrates knowledge of standards, their relationship to student learning,	Communicates appropriate standards, demonstrates knowledge of standards	3a
c. Uses a <b>variety of instructional strategies</b> to reach all learners.	Incorporates a variety of instructional strategies, prepares for all learning styles, differentiates learning based on need, accommodates learners. And plans for gifted learners.	Incorporates a variety of instructional strategies, prepares for all learning styles, differentiates learning based on need, and accommodates learners,	Incorporates a variety of instructional strategies, prepares for all learning styles, and differentiates learning based on need,	Incorporates a variety of instructional strategies and prepares for all learning styles.	3c
d. Utilizes a variety of concrete <b>manipulatives, online programs, and technologies to teach concepts.</b>	Applies knowledge to incorporate a variety of tools, uses manipulatives and models, uses software packages, demonstrates sound decisions about tools. Uses them effectively and understands their limitations.	Applies knowledge to incorporate a variety of tools, uses manipulatives and models, uses software packages, demonstrates sound decisions about tools. Uses them effectively and understands their limitations.	Applies knowledge to incorporate a variety of tools, uses manipulatives and models, uses software packages, demonstrates sound decisions about tools	Applies knowledge to incorporate a variety of tools, uses manipulatives and models, uses software packages	4e

	Highly capable of using calculators and other technology.				
e. Uses <b>contextual and real-world</b> problems to <b>create student discourse</b> and to reach and accommodate all learners.	Provide students with opportunities to communicate about mathematics and make connections among mathematics, other content areas, everyday life, and the workplace.				3d
f. Uses SLOs geared to <b>student engagement, high-quality tasks, identifying key mathematical ideas, and addressing misconceptions.</b>	Implements techniques related to student engagement and communication, selects high-quality tasks, guides mathematical discussions, identifies key mathematical ideas, identifies and addresses student misconceptions, and employs a range of questioning strategies. Recognizes student ideas and conjectures have value.	Implements techniques related to student engagement and communication, selects high-quality tasks, guides mathematical discussions, identifies key mathematical ideas, identifies and addresses student misconceptions, and employs a range of questioning strategies.	Implements techniques related to student engagement and communication, selects high-quality tasks, guides mathematical discussions, identifies key mathematical ideas,	Implements techniques related to student engagement and communication, selects high-quality tasks, guides mathematical discussions,	3e
<b>II. CARING LEADER</b>					
a. Displays a <b>responsiveness</b> to student needs and shows <b>equity</b>	Shows fair and equitable treatment for all students, has high expectations for all students, shows ethical treatment of all students, and is responsive to student needs. Builds genuine rapport with students and shows caring.	Shows fair and equitable treatment for all students, has high expectations for all students, shows ethical treatment of all students, and is responsive to student needs.	Shows fair and equitable treatment for all students and has high expectations for all students.	Shows fair and equitable treatment for all students.	4d
b. Incorporate knowledge of individual differences and the cultural and language diversity that exists within classrooms and include	Incorporates knowledge of individual differences and the cultural and language diversity that exists within classrooms, includes	Incorporates knowledge of individual differences and the cultural and language diversity that exists within classrooms, includes	Incorporates knowledge of individual differences and the cultural and language diversity that exists within classrooms, includes	Incorporates knowledge of individual differences and the cultural and language diversity that exists within classrooms	3e

culturally relevant perspectives as a means to motivate and engage students.	culturally relevant perspectives, motivates student through including them and their identities, and engages students through respectful practices. Takes time to learn student cultures and greetings.	culturally relevant perspectives, motivates student through including them and their identities, and engages students through respectful practices.	culturally relevant perspectives, and motivates student through including them and their identities.	and includes culturally relevant perspectives.	
<b>III. LIFE LONG LEARNER</b>					
a. <b>Impacts student learning</b> by checking for understanding and assessing learning and monitoring student progress.	Monitors students' progress, makes instructional decisions based on monitoring, measures students' mathematical understanding and ability, and uses formative and summative assessments. Demonstrates the ability to meet student learning needs. Researches the best ways to help students learn.	Monitors students' progress, makes instructional decisions based on monitoring, measures students' mathematical understanding and ability, and uses formative and summative assessments.	Monitors students' progress, makes instructional decisions based on monitoring, and measures students' mathematical understanding and ability.	Monitors students' progress and makes instructional decisions based on monitoring.	3g
b Demonstrates <b>use of assessment data to inform instruction by reflecting on mathematical proficiencies.</b>	Plans assessments, selects appropriate assessment tools, implements assessments in a variety of ways, interprets assessment data, uses formative and summative assessments to inform instruction, and reflects on the mathematical proficiencies essential for all students. Uses data to challenge students and remediate students.	Plans assessments, selects appropriate assessment tools, implements assessments in a variety of ways, interprets assessment data, uses formative and summative assessments to inform instruction, and reflects on the mathematical proficiencies essential for all students.	Plans assessments, selects appropriate assessment tools, implements assessments in a variety of ways, and interprets assessment data.	Plans assessments and selects appropriate assessment tools.	<u>3f</u>

**Domain 1: ADEPT4.0 4.0 Lesson Pre and Post Conference Reflection**

<b>R E F L E C T I O N</b>	<b>Performance Standard</b>	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
	Candidate makes thoughtful and accurate assessments of the effectiveness of the lesson as evidenced by the self- reflection after each observation.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%
	Candidate offers (2-3) specific actions to improve his/her teaching.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%
	Candidate accepts personal responsibility contributing to school improvement.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%
	Paper meets length requirement- minimum of 1.5 pages. Paper contains virtually no grammatical and mechanical errors.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%



**Domain 2 Planning with Demographics Reflection**

<b>D E M O G R A P H I C S</b>	<b>Performance Standard</b>	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
	Reflection on impact of planning using demographic information is insightful and detailed. Facts are consistently linked to topic and discussed with highly effective explanations.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%
	Community demographic information in paper is factually accurate, and the interpretation of fact is insightful, sophisticated, and consistent. Number of resources meets requirement.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%
	School demographic information is factually accurate, and the interpretation of fact is insightful, sophisticated, and consistent. Number of resources meets requirement.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%
	Paper meets length requirement of minimum of 1.5 pages. Paper contains virtually no grammatical and mechanical errors.	Always 100%	Often 80%	Sometimes 50%	Rarely 20%



Student: ..... Date..... Subject.....

Indicator	Exemplary 4	Proficient 3	Needs Improvement 2	Unsatisfactory 1	Comments
<b><u>I. EFFECTIVE PRACTITIONER</u></b>					
Effective communication and questioning					
Fully prepared for eventualities; flexible					
Resources are ready and developmentally appropriate					
Effective use of time and pacing					
Keeps students on task					
Uses a variety of teaching strategies					
Includes review and developmentally appropriate assessments					
Professional dress					
Demeanor and enthusiasm about content and teaching					
Works within the policies of the school					
<b><u>II. CARING LEADER</u></b>					
Effective classroom management					
Responsive to student needs; encourages students to try					
Appropriate praise and correction					
Directs behavior to acceptable ones; shows respect to students and colleagues					
Shows respect and acceptance of students' diverse family backgrounds					
<b><u>III. LIFE LONG LEARNER</u></b>					
Adequate planning and preparation					
Lessons align with appropriate SC Standards: ADEPT4.0 1.1 SO					
Demonstrates initiative					
Modifies plans in an appropriate manner; modifies instruction for learning styles					
Uses Assessments for instruction					

Evaluator:.....Position .....Total (80) .....

Using this lesson plan, did the candidate contribute to student learning? \_\_\_\_\_ Supervising Teacher \_\_\_\_\_

## SC's Assisting, Developing, and Evaluating Professional Teaching (ADEPT4.0) aligned to NCTM

ADEPT4.0 Performance Standards (APSs) for classroom teachers: they set forth the state's expectations for what teachers should know, be able to do, and take responsibility for accomplishing on an ongoing basis. All school districts use some teacher evaluation system that aligns with ADEPT4.0.

ADEPT4.0 focuses on assisting and encouraging teachers to assess continuously and enhance the effectiveness of their typical teaching performance--- as opposed to merely requiring teachers to demonstrate sets of skills during showcase lessons.

The Performance Standards place increased emphasis on the teacher's ability to focus on the appropriate academic standards, assess and analyze student performance, and use this information to guide planning and instruction, and demonstrate that the instruction has resulted in student learning.

ADEPT4.0 defines student achievement as *students' measurable growth in a particular area or areas over a specified period of time.*

Domain I: Planning	NCTM Standard
APS 1: Long-range planning	3b
APS 2: Short-range planning of instruction	3a
APS 3: Planning assessments and using data	3f
Domain II: Instruction	
APS 4: Establishing and maintaining high expectations for learners	4d
APS 5: Using instructional strategies to facilitate learning	3c
APS 6: Providing content for learners	1a
APS 7: Monitoring, assessing, and enhancing learning	3g
Domain III: Environment	
APS 8: Maintaining an environment that promotes learning	4b
APS 9: Managing the classroom	4c
Domain IV: Professionalism	
APS 10: Fulfilling professional responsibilities	6b

## **Content-Focused Unit and Analysis Assignment**

Purpose: The purpose of the assignment is for student teachers to plan and implement a content-focused unit including using demographics for planning and analysis, administering assessments, and analyzing results across 4 demographic areas: male/female, Socio-Economic Status, Ethnicity/race, and Exceptionalities including IEPs, 504s, resource, gifted, and ESOL.

All parts of the Content-focused Unit are due one week after the post-tests are complete. Upload all components to the Digital Portfolio or give a link to the Unit Folder.

### **Element 1: Part 1 of Demographics:**

1. Collection of demographics specific to the students in the content-focused unit. Collect the four sets of demographic data and put into four graphs. Under each graph include a caption of what the graph is telling you in terms of planning and accommodations as well as the source of the information. Although student surveys can be used to understand students and their interests, the below four graphs are required. These demographic graphs set the stage for planning using demographic information and are also used during analysis to check for gaps in learning and/or teacher biases.
2. Four demographic areas: Male/Female, Socio-Economic Status, Ethnicity/Race, and Exceptionalities (such as IEPs, 504s, resource, gifted, and ESOL.)

### **Element 2: Unit Plan**

1. Using the NGU Unit matrix, create your unit plan (length of time varies with the grade level for one or more weeks) showing the alignment of standards, essential questions, and assessments. This can be done by giving details and **highlighting the alignment**. Using an electronic highlighter, show the **alignment** of the standard, objective, EQ, instruction, and assessment. Point the evaluator to this alignment in the unit matrix and again in the observed planned lessons and the ADEPT 4.0 scripted lesson plan.
2. Using a **different highlighter color**, show where the demographics were used in the plan and the instruction. You will need to reflect on this later; this will guide your reflection as you see how you incorporated student differences, needs, cultures, and interests in your lesson plan and instruction.
3. An electronic copy of the NGU Unit Planning Matrix is in the Shared folder. Make a copy of this and save it to your drive. Highlight the **Alignment** and **demographics** on the Unit Planning Matrix.

### **Element 3: Assessment Plan**

1. Include a copy of the pre-assessment and the post-assessment. Mark the assessments using a **highlighter to show the alignment** of standard and objective and where they are assessed in the assessments.
2. Include copies of all formative assessments. Label them by the lesson plans in which they occur. **Highlight the alignment** to the daily objective in the lesson plan outline of the NGU Unit Matrix.

### **Element 4: Evidence of student achievement**

1. Analyze the pre-test data with **an item analysis spreadsheet** showing the questions missed. Analyze the post-test data with **an item analysis spreadsheet** showing the questions missed. Do not use student names. A sample is provided. Analyze the gains made between the pre and the post-assessment. **Use different color highlighters to mark** the high, medium, and low achiever on the item analysis. See the sample below.
2. Describe your formative assessments and generalize about how well students did and how you used your formative assessment information to improve lessons. Give details.
3. Create a comparison graph of the pre-test and post-test item analysis. Example below.
4. Going back to the demographics, create graphs showing how females and males **gained** from pre to post-assessments. Show how ethnic groups gained. Show how Free and reduced groups gained. Show how each diverse group gained. You will use this to check for gaps in learning and/or biases. Write a caption telling what the analysis tells you in terms of student performances and why you believe there may have been some variation in performance. See the samples below. In this focus on demographics, you are comparing the % gains for each group from the Pre- and Post-test.

**Element 5: Reflections on student achievement**

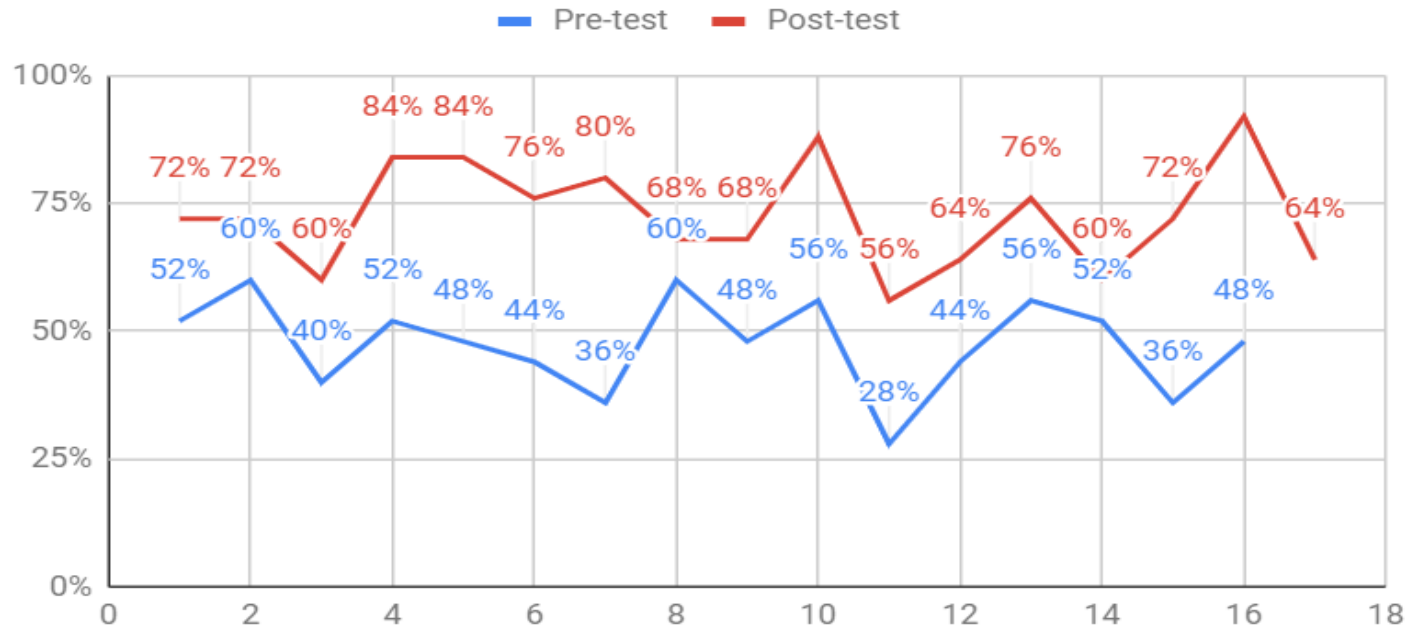
1. Using specific data and results discuss how well your students did in learning the content of your unit. Explain how the diverse groups gained during the Unit based on your graphs. Discuss any student who did not gain or meet your expectations and explain why. Be detailed in discussing gains giving concrete examples.
2. Identify two to four areas for improvement. Be specific in what you need to change should you teach this unit again based on student data analysis in order to see higher gains.
3. Identify one to two areas for further research and study to be better prepared in the future to teach the same content and to differentiate material for all learners.
4. The reflection should be specific, thorough, targeted, and meaningful. Explain what the students learned and what data showed that they learned and explain why some students did not perform as expected.

**Assessment Item Analysis**

Student	Questions Correct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	13	x		x		x	x				x		x	x			x	x		x		x					
2	16			x	x								x	x	x			x	x			x			x		High
3	10			x	x		x			x	x	x	x	x			x	x		x		x	x		x	x	
4	13				x				x		x			x	x		x	x	x	x	x	x		x			
5	12			x	x		x	x			x	x	x	x	x			x				x	x	x			Med
6	11	x		x		x	x				x	x		x			x	x	x	x	x	x			x		

7	9	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
8	15		x	x				x	x	x	x		x	x	x	x				
9	12		x		x		x	x	x	x	x	x	x	x	x	x	x			Med
10	14			x	x			x	x	x	x		x	x	x		x	x		
11	7		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	low
12	11		x	x	x	x	x	x	x	x	x	x	x	x						x
13	14		x	x	x			x		x			x	x	x			x	x	x
14	9	x	x		x	x	x	x	x	x	x	x	x	x	x					x
15	9	x	x		x	x	x	x	x	x	x	x	x	x						x
16	12	x	x		x	x		x	x	x	x	x	x	x	x					
17	0	A	A																	

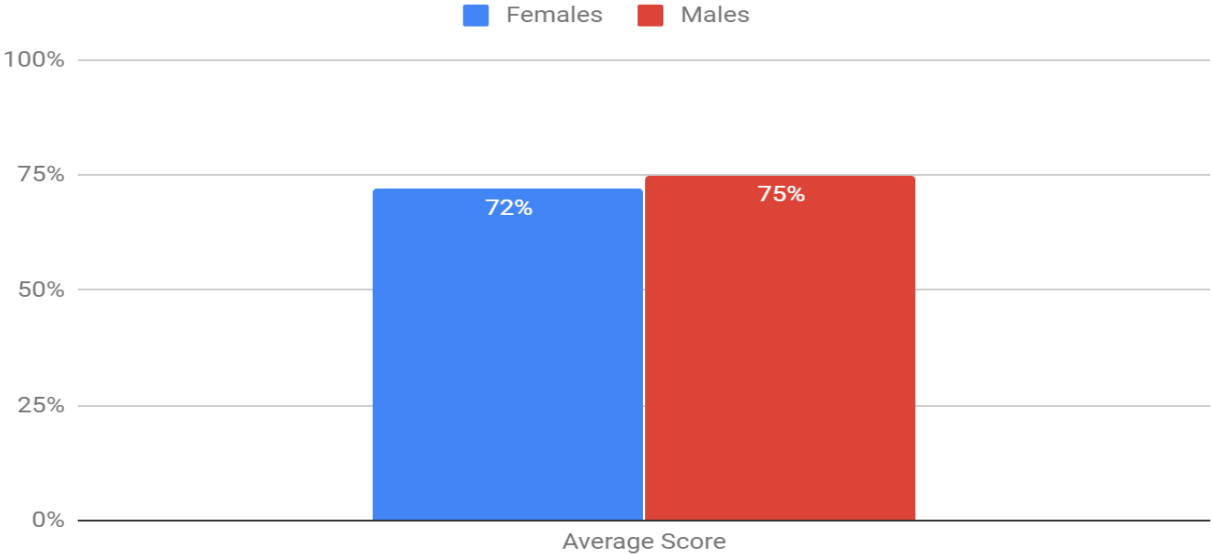
# Comparison Data



This can be a line graph like this one or a bar graph showing pre- and post-scores. Discuss the gains made by students in the class.

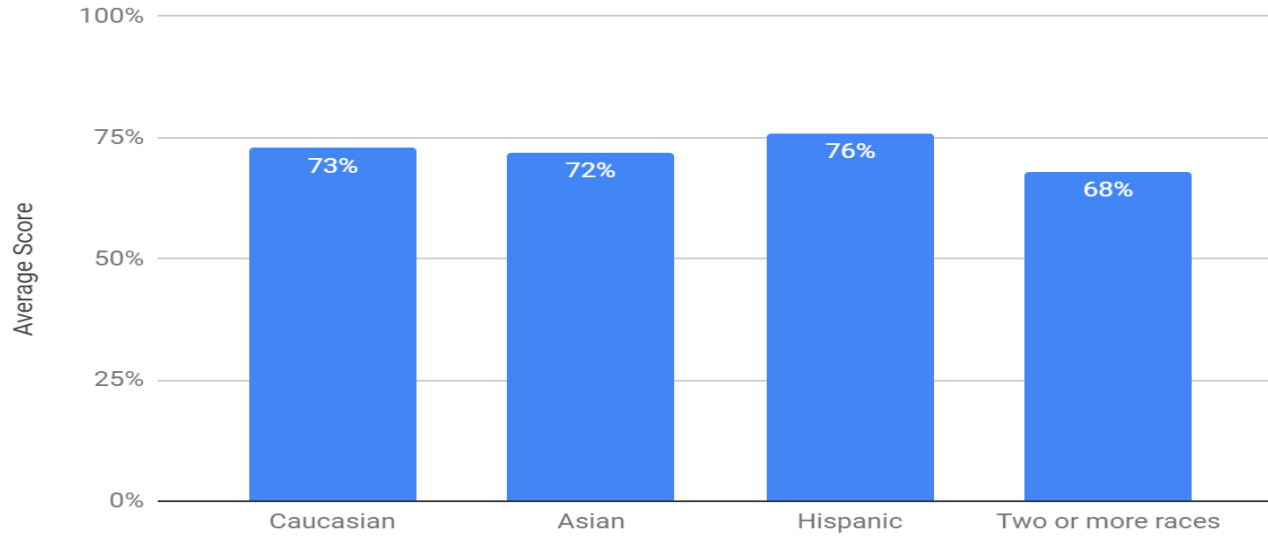


# Gender Average



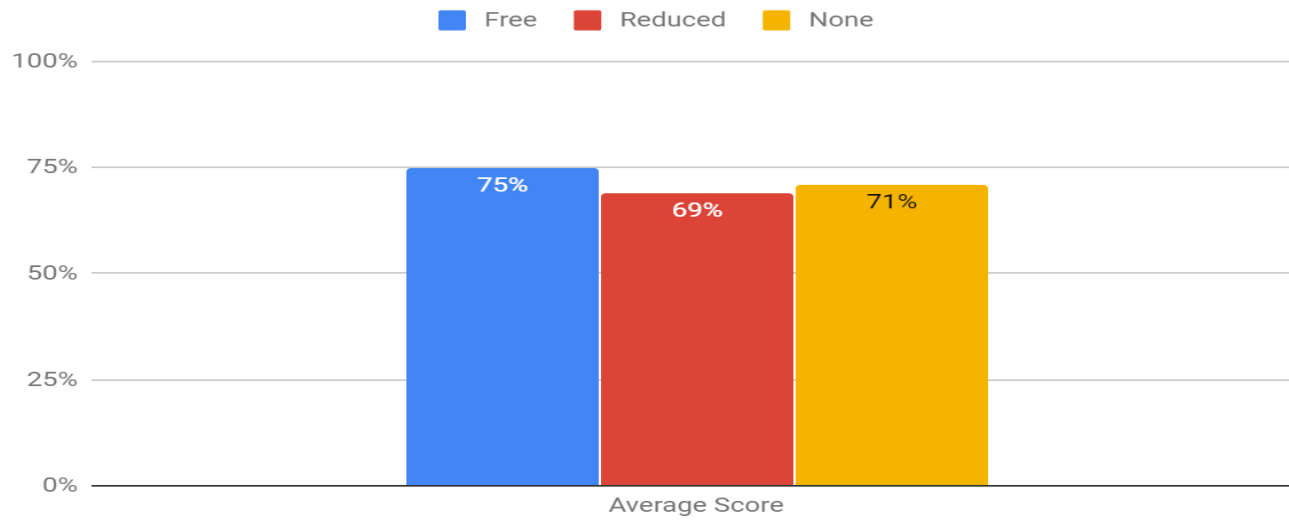
The females performed slightly lower than the males. The primary reason for this difference is interest. The females in this class chose math as their least favorite subject.

## Ethnicity Average



The two or more races category scored the lowest. The number of students in this category is low and one of them missed 3 days during the unit.

## Free/reduced lunch Average



The reduced lunch group showed lower scores. Among them are 4 IEPs and 2 504s and 1 ESOL student. There are learning difficulties along with economic differences that impacted their performances on the assessment.

<b>Content-focused Element</b>	<b>Unit Plan Exemplary - 4</b>	<b>And Analysis Proficient -3</b>	<b>Rubric Needs Improvement - 2</b>	<b>Unsatisfactory - 1</b>
<p><b>Element 1 –</b> Description of the classroom context and the students taught (including individual differences)</p> <p>Weight 1 or 10%</p>	<p>Demographic description of context and student characteristics contains rich, in-depth information on four or five documented categories, has graphs of the class, includes academic and non-academic information, Describes the source of the data, Graphs have captions describing the significance of the information to instruction.</p>	<p>Demographic description of context and student characteristics contains rich, in-depth information from at least four documented sources, has graphs of the class, includes academic and non-academic information, Describes the source of the data.</p>	<p>Demographic description of context and student characteristics contains rich, in-depth information from at least three documented sources, gives the source of the data.</p>	<p>Demographic description of context and student characteristics contains rich, in-depth information from at least two documented sources.</p>
<p><b>Element 2 –</b> Description of the desired student learning objectives for this unit of instruction and Instructional plans (unit plan and daily lesson plans)</p> <p>Weight 2 or 20%</p>	<p>SLOs are clearly stated and aligned with curriculum standards and/or indicators. Includes specific essential questions to guide learning that align to SLOs. Instructional plans are well written, clear, and free of errors. Lesson plans are on NGU template, use demographic information in planning, and include</p>	<p>SLOs are clearly stated and aligned with curriculum standards. Includes specific essential questions that align to SLOs to guide learning. Instructional plans are well written, clear, and have no more than two errors. Lesson plans are on NGU</p>	<p>SLOs are clearly stated and aligned with curriculum standards. Includes specific essential questions that align to SLOs to guide learning. Instructional plans are well written, clear, have no more than four errors, and are on NGU templates.</p>	<p>SLOs are clearly stated and aligned with curriculum standards. Includes specific essential questions that align to SLOs to guide learning. Instructional plans are well written, clear, have no more than six errors,</p>

	specific accommodations based on demographics. Lessons build on each other.	template and uses demographic information in planning.		and are on NGU templates.
<b>Element 3 –</b> Assessment plan, including pre-and post-assessment objectives, showing alignment with SLOs and instruction  Weight 2 or 20%	Assessment plan indicates clear alignment with SLOs and instructional activities. Student characteristics, including prior learning and development, are taken into account for all students. Expectations for performance are appropriately high for all students. Assessments used in the unit are appropriate and varied. Consistent and actionable feedback is given to students. SLO is traced through instruction to assessment.	Assessment plan indicates clear alignment with SLOs and instructional activities. Student characteristics, including prior learning and development, are taken into account for all students. Expectations for performance are appropriately high for all students. Assessments used in the unit are appropriate and varied.	Assessment plan indicates clear alignment with SLOs and instructional activities. Student characteristics, including prior learning and development, are taken into account for all students. Expectations for performance are appropriately high for all students.	Assessment plan indicates clear alignment with SLOs and instructional activities. Student characteristics, including prior learning and development, are taken into account for all students.
<b>Element 4 –</b> Evidence of student achievement (student gains, accomplishment of objectives) acquired from analysis of pre-and post-	Use of appropriate technology to carry out in-depth analysis of individual students' strengths and weaknesses, such as item analysis of assessment instruments. Student teachers use analysis to clearly interpret and communicate student	Use of appropriate technology to carry out in-depth analysis of individual students' strengths and weaknesses, such as item analysis of assessment instruments. Student teachers use analysis to clearly interpret	Use of appropriate technology to carry out in-depth analysis of individual students' strengths and weaknesses, such as item analysis of assessment instruments.	Use of appropriate technology to carry out in-depth analysis of individual students' strengths and weaknesses, such as item analysis

<p>assessments of all students in the class</p> <p>Weight 2 or 20 %</p>	<p>performance data. Student teachers analyze assessment data across multiple diverse categories and check for biases. Student teachers pinpoint student needs and increase student learning and are able to report performance to the cooperating teacher and parents.</p>	<p>and communicate student performance data. Student teachers pinpoint student needs and increase student learning</p>	<p>Student teachers use analysis to clearly interpret and communicate student performance data.</p>	<p>of assessment instruments.</p>
<p><b>Element 5</b> – Reflections on student achievement, results, unit content, instructional process, assessments</p> <p>Weight 3 or 30 %</p>	<p>Student teacher’s reflection identifies specific factors affecting student learning, includes possible ways to modify such instruction in ways that will enhance student learning. Student teacher reflection presents a plan to help all students learn and identifies appropriate resources and techniques for doing so. Student teachers measure student gains across all demographic groups and identify biases that may exist. Reflection addresses gains on SLOs.</p>	<p>Student teacher’s reflection identifies specific factors affecting student learning, includes possible ways to modify such instruction in ways that will enhance student learning. Student teacher reflection presents a plan to help all students learn and identifies appropriate resources and techniques for doing so. Student teachers measure student gains across all demographic groups.</p>	<p>Student teacher’s reflection identifies specific factors affecting student learning, includes possible ways to modify such instruction in ways that will enhance student learning. Student teacher reflection presents a plan to help all students learn and identifies appropriate resources and techniques for doing so.</p>	<p>Student teacher’s reflection identifies specific factors affecting student learning, includes possible ways to modify such instruction in ways that will enhance student learning.</p>

**Mathematics Assessment and Rubrics**

**Contents:**

1. Mathematics Notebook
2. Resume Assessment and Scoring Guide
3. Mock Interview Rate
4. Math Education Seminar Presentation Scoring Sheet
5. Oral Language Rubric
6. Student Teaching Alignments and Addendums.

NCTM Standards 2012

**Standard 1: Content Knowledge**

Effective teachers of secondary mathematics demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, connections, and applications within and among mathematical content domains.

Preservice teacher candidates:

**1a)** Demonstrate and apply knowledge of major mathematics concepts, algorithms, procedures, applications in varied contexts, and connections within and among mathematical domains (Number, Algebra, Geometry, Trigonometry, Statistics, Probability, Calculus, and Discrete Mathematics) as outlined in the *NCTM NCATE Mathematics Content for Secondary*

**Standard 2: Mathematical Practices**

Effective teachers of secondary mathematics solve problems, represent mathematical ideas, reason, prove, use mathematical models, attend to precision, identify elements of structure, generalize, engage in mathematical communication, and make connections as essential mathematical practices. They understand that these practices intersect with mathematical content and that understanding relies on the ability to demonstrate these practices within and among mathematical domains and in their teaching.

Preservice teacher candidates:

**2a)** Use problem solving to develop conceptual understanding, make sense of a wide variety of problems and persevere in solving them, apply and adapt a variety of strategies in solving problems confronted within the field of mathematics and other contexts, and formulate and test conjectures in order to frame generalizations.

**2b)** Reason abstractly, reflectively, and quantitatively with attention to units, constructing viable arguments and proofs, and critiquing the reasoning of others; represent and model generalizations using mathematics; recognize structure and express regularity in patterns of mathematical reasoning; use multiple representations to model and describe mathematics; and utilize appropriate mathematical vocabulary and symbols to communicate mathematical ideas to others.

**2c)** Formulate, represent, analyze, and interpret mathematical models derived from real-world contexts or mathematical problems.

**2d)** Organize mathematical thinking and use the language of mathematics to express ideas precisely, both orally and in writing to multiple audiences.

**2e)** Demonstrate the interconnectedness of mathematical ideas and how they build on one another and recognize and apply mathematical connections among mathematical ideas and across various content areas and real-world contexts.

**2f)** Model how the development of mathematical understanding within and among mathematical domains intersects with the mathematical practices of problem-solving, reasoning, communicating, connecting, and representing.

**Standard 3: Content Pedagogy**

Effective teachers of secondary mathematics apply knowledge of curriculum standards for mathematics and their relationship to student learning within and across mathematical domains. They incorporate research-based mathematical experiences and include multiple instructional strategies and mathematics-specific technological tools in their teaching to develop all students' mathematical understanding and proficiency. They provide students with opportunities to do mathematics – talking about it and connecting it to both theoretical and real-world contexts. They plan, select, implement, interpret, and use formative and summative assessments for monitoring student learning, measuring student mathematical understanding, and informing practice.

Preservice teacher candidates:

**3a)** Apply knowledge of curriculum standards for secondary mathematics and their relationship to student learning within and across mathematical domains.

**3b)** Analyze and consider research in planning for and leading students in rich mathematical learning experiences.

**3c)** Plan lessons and units that incorporate a variety of strategies, differentiated instruction for diverse populations, and mathematics-specific and instructional technologies in building all students' conceptual understanding and procedural proficiency.



**3d)** Provide students with opportunities to communicate about mathematics and make connections among mathematics, other content areas, everyday life, and the workplace.

**3e)** Implement techniques related to student engagement and communication including selecting high-quality tasks, guiding mathematical discussions, identifying key mathematical ideas, identifying and addressing student misconceptions, and employing a range of questioning strategies.

**3f)** Plan, select, implement, interpret, and use formative and summative assessments to inform instruction by reflecting on mathematical proficiencies essential for all students.

**3g)** Monitor students' progress, make instructional decisions, and measure students' mathematical understanding and ability using formative and summative assessments.

**Standard 4: Mathematical Learning Environment**

Effective teachers of secondary mathematics exhibit knowledge of adolescent learning, development, and behavior. They use this knowledge to plan and create sequential learning opportunities grounded in mathematics education research where students are actively engaged in the mathematics they are learning and building from prior knowledge and skills. They demonstrate a positive disposition toward mathematical practices and learning, include culturally relevant perspectives in teaching, and demonstrate equitable and ethical treatment of and high expectations for all students. They use instructional tools such as manipulatives, digital tools, and virtual resources to enhance learning while recognizing the possible limitations of such tools.

Preservice teacher candidates:

**4a)** Exhibit knowledge of adolescent learning, development, and behavior and demonstrate a positive disposition toward mathematical processes and learning.

**4b)** Plan and create developmentally appropriate, sequential, and challenging learning opportunities grounded in mathematics education research in which students are actively engaged in building new knowledge from prior knowledge and experiences.

**4c)** Incorporate knowledge of individual differences and the cultural and language diversity that exists within classrooms and include culturally relevant perspectives as a means to motivate and engage students.

**4d)** Demonstrate equitable and ethical treatment of and high expectations for all students.

**4e)** Apply mathematical content and pedagogical knowledge to select and use instructional tools such as manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies (e.g., graphing tools, interactive geometry software, computer algebra systems, and statistical packages); and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools.

**Standard 5: Impact on Student Learning**

Effective teachers of secondary mathematics provide evidence demonstrating that as a result of their instruction, secondary students' conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and application of major mathematics concepts in varied contexts have increased. These teachers support the continual development of a productive disposition toward mathematics. They show that new student mathematical knowledge has been created as a consequence of their ability to engage students in mathematical experiences that are developmentally appropriate, require active engagement, and include mathematics-specific technology in building new knowledge.

Preservice teacher candidates:

**5a)** Verify that secondary students demonstrate conceptual understanding; procedural fluency; the ability to formulate, represent, and solve problems; logical reasoning and continuous reflection on that reasoning; productive disposition toward mathematics; and the application of mathematics in a variety of contexts within major mathematical domains.

**5b)** Engage students in developmentally appropriate mathematical activities and investigations that require active engagement and include mathematics-specific technology in building new knowledge.

**5c)** Collect, organize, analyze, and reflect on diagnostic, formative, and summative assessment evidence and determine the extent to which students' mathematical proficiencies have increased as a result of their instruction.

**Standard 6: Professional Knowledge and Skills**

Effective teachers of secondary mathematics are lifelong learners and recognize that learning is often collaborative. They participate in professional development experiences specific to mathematics and mathematics education, draw upon mathematics education research to inform practice, continuously reflect on their practice, and utilize resources from professional mathematics organizations.

Preservice teacher candidates:

**6a)** Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics.

**6b)** Engage in continuous and collaborative learning that draws upon research in mathematics education to inform practice; enhance learning opportunities for all students' mathematical knowledge development; involve colleagues, other school professionals, families, and various stakeholders; and advance their development as a reflective practitioner.

**6c)** Utilize resources from professional mathematics education organizations such as print, digital, and virtual resources/collections.

## **Mathematics Notebook**

The Mathematics Notebook will consist of four sections aligned to the 2012 NCTM Standards.

### **Mathematical Practices Section of Notebook.**

2A: Problem-solving

Five strategies/activities

2B: Reasoning and proof

Five strategies/activities

2C: Real-world problems/authentic contexts

Five activities

2D: Vocabulary bank (From TA courses or Praxis 2 review)

2E: Math in other contexts and making connections

Two STEM lessons

2F: Connect domains

Two lessons that tied two or more domains of the mathematical practices of problem-solving, reasoning, communicating, connecting, and representing

### **Content Pedagogy section of Mathematics Notebook**

3a: Include your unit plan

3b: Include your demographics and two article reviews on teaching mathematics. One article should be on accommodating diverse learners.

3c: Two lesson plans demonstrating accommodations plus reflections on if the accommodations helped and/or differentiating instruction for multiple levels of understanding.

3d: Two lesson plans demonstrating mathematics connected to life.

3e: Two lessons showing the use of EQ, DOK, HOT, and questioning techniques.

3f: Show the pre- and post-test of the unit. Show the analysis of an assessment related to a lesson taught.

3G: Include the reflections of all lessons taught and what changes you would make to increase student engagement and learning.

### **Mathematical Learning Environment**

4a: Include your class rules, organizational plan, parent communication plan, substitute folder list, and first day of school PowerPoint.

4b: Include two lessons demonstrating research used and how to test for and build on prior knowledge.

4c: Include five researched strategies to increase student engagement/motivation.

4d: Include the FEE from all taught lessons.

4e: Include two lessons that utilize a variety of resources and technology and annotated list of five resources or technology that aid learning at levels of understanding such as struggling or gifted students.

### **Professional Section of Math notebook:**

6a: Include the review of two scholarly journal articles.

Include membership in one professional organization (TEA, SCASCD, Beta Delta, NCTM)

Include Professional development activity sheet from methods

Include the professional development plan

Include at least one professional conference attended

AOD self-assessment

Resume, cover letter, business card, photo

Self-assessment of Teaching Performance.

Philosophy of Mathematics Education

6b. List collaborative efforts or professional seminars attended

6c: Two research article reviews.

**Unit Plan:**

The unit plan is implemented in your pre-student teaching to mirror your Content Focused Unit Plan Analysis. You will create an assessment or assessments to analyze the needs of the students for the unit. You will create demographic data and charts for the students in your classroom. You will plan daily lesson plans and experiences based upon your assessment of the students and their demographic information highlighting the alignment of objectives, assessments, instruction, and demographics.

You will have detailed lesson plans for each activity carried out. At the end of each lesson, there will be a formative assessment and the data gathered on the students' progress. You will reflect on the progress of the students after each lesson and explain what changes you made to the next lesson based upon student performance on the previous lesson.

After you have completed the three consecutive lessons with the students, you will once again assess the students with a post-test and chart their progress using data and graphs. You will reflect on your ability to impact student learning based upon student performance. You will explain the student gains in learning and identify ways to change the unit in order to create more learning opportunities for all students. You are teaching one content lesson daily.

Advantages of this approach: 1. You are planning for real students. 2. You will learn to adjust lessons and approaches based on what works best for particular students. 3. You will learn how to reflect on student progress and adjust lessons to meet student needs. 4. You will learn how to be reflective and to analyze student data and use it to drive instructional decisions. 5. This process mirrors the Content Focused Unit Plan Analysis in student teaching. 6. You will gain a valuable understanding of how students learn, where students struggle, timing and pacing, assessments and analyzing data, and making informed instructional decisions based on individual student needs.

Once you have mapped out your plan, you will demonstrate how analysis of student progress has shaped changes and led to different instructional approaches. You will analyze your effectiveness in impacting student learning based on assessment data. You will write a reflection explaining the student performances and what surprised you the most. You will include graphs of performance over two areas of diversity and explain the student gains over the unit.

Evidence submitted	Exemplary 4	Proficient 3	Needs Improvement 2	Unsatisfactory 1
<b>Mathematical Practices Section of Notebook.</b>				
2A: Problem-solving Five strategies/ Activities annotated NCTM 1.4 (03) NCTM 2a	Five appropriate activities, subject and level, what the activity demonstrates, activities have quality and move towards rigor.	Five appropriate activities, subject and level, what the activity demonstrates, activities have quality	Five appropriate activities, subject and level, what the activity demonstrates.	Five appropriate activities, subject and level.
2B: Reasoning and proof Five strategies/ Activities annotated NCTM 2.4 NCTM 2b	Five appropriate activities, giving the subject and level, and explanation of how to use it, goals of the activities and how you use them.	Five appropriate activities, giving the subject and level, and explanation of how to use it, goals of the activities	Five appropriate activities, giving the subject and level, and explanation of how to use it	Five appropriate activities, giving the subject and level
2C: Real-world problems/authentic contexts Five activities annotated NCTM 7.2 (03) NCTM 2c	Five activities that hook students, subject and level, relevant to their lives, meaningful mathematics, challenging, rigorous	Five activities that hook students, subject and level, relevant to their lives, meaningful mathematics, challenging	Five activities that hook students, subject and level, relevant to their lives, meaningful mathematics	Five activities that hook students, subject and level, relevant to their lives.
2D: Vocabulary bank NCTM 3.2 NCTM 2d	Glossary of mathematical terms used across three subject areas. Ability to define, explain, and use the terms.	Glossary of mathematical terms used across three subject areas. Ability to define, explain	Glossary of mathematical terms used across three subject areas. Ability to define	Glossary of mathematical terms used across three subject areas.
2E: Math in other contexts and making connections Two STEM lessons NCTM 8.9 (03) NCTM 2e	Two STEM lessons that are planned in detail, engaging, complex, connect to other disciplines, and include rigor.	Two STEM lessons that are planned in detail, engaging, complex, connect to other disciplines,	Two STEM lessons that are planned in detail, engaging, complex,	Two STEM lessons that are planned in detail, engaging,
2F: Connect domains Two lessons that tied two or more domains of the mathematical practices NCTM 4.1 NCTM 2f	Two lessons that include mathematical practices, demonstrate connections, go beyond the textbook, lead students to make connections, and engage students.	Two lessons that include mathematical practices, demonstrate connections, go beyond the textbook, lead students to make connections	Two lessons that include mathematical practices, demonstrate connections, go beyond the textbook.	Two lessons that include mathematical practices, demonstrate connections.

<b>Content Pedagogy section of Mathematics Notebook</b>				
3a: Include your unit plan NCTM 8.4 NCTM 3a	Unit plan is complete with all sections included, is of good quality, includes all the elements required in each section, and has sufficient detail.	Unit plan is complete with all sections included, is of good quality, includes all the elements required in each section	Unit plan is complete with all sections included, is of good quality	Unit plan is complete with all sections included.
3b: Include your demographics and two article reviews on teaching mathematics. NCTM 8.6 (03) NCTM 3b	Include the demographics of the class and two article reviews. Explain how this type of research improves lessons and learning for students. Explain how you use research to meet student needs.	Include the demographics of the class and one article reviews. Explain how this type of research improves lessons and learning for students.	Include the demographics of the class and one article review.	Include the demographics of the class or one article review.
3c: Two lesson plans demonstrating accommodations plus reflections NCTM 8.1 NCTM 3c	Two lesson plans highlighting accommodations. Include reflections after using the accommodations on the impact on student learning.	Two lesson plans highlighting accommodations. Include reflections after using the accommodations	Two lesson plans highlighting accommodations.	One lesson plans highlighting accommodations.
3d: Two lesson plans demonstrating mathematics connected to life NCTM 8.8 NCTM 3d	Two lesson plans that are applicable to real life. Lessons are interesting and require application. Students carry out some project or investigation.	Two lesson plans that are applicable to real life. Lessons are interesting and require application.	Two lesson plans that are applicable to real life. Lessons are interesting	One lesson plan that is applicable to real life.
3e: Two lessons showing the use of EQ, DOK, HOT, and questioning techniques. NCTM 7.2 (03) NCTM 3e	Two lesson plans highlighting the use of questioning that are higher level and more complex. Use of collaborative learning and student discourse. Students demonstrate depth of learning.	Two lesson plans highlighting the use of questioning that are higher level and more complex. Use of collaborative learning and student discourse.	Two lesson plans highlighting the use of questioning that are higher level and more complex.	Two lesson plans highlighting the use of questioning that are higher level
3f: Show the pre- and post-test of the unit. Show the analysis of an	Pre- and post-test match objectives, assess important mathematics, are aligned to each other, and address the	Pre- and post-test match objectives, assess important	Pre- and post-test match objectives, assess important	Pre- and post-test match objectives, no analysis of a

assessment related to a lesson taught. NCTM 7.5 (03) NCTM 3f	EQ/EP. Thoughtful analysis of a formative assessment. Reflection on that lesson.	mathematics, are aligned to each other, Thoughtful analysis of a formative assessment.	mathematics, does not analyze formative assessments	formative assessment
3G: Include the reflections of all lessons taught NCTM 7.5 (03) NCTM 3g	Reflections show depth of understanding student learning, impact and gains, and how to re-address problem areas for students	Reflections show depth of understanding student learning, impact and gains	Reflections show depth of understanding student learning	Reflections do not show depth of understanding student learning
<b>Mathematical Learning Environment</b>				
4a: Include your class rules, organizational plan, parent communication plan, substitute folder list, and first day of school PowerPoint. NCTM 4a	Items included show how you will set the environment for learning. All four are complete, detailed, of good quality.	Items included show how you will set the environment for learning. All four are complete, detailed	Items included show how you will set the environment for learning. Three are complete	Items included show how you will set the environment for learning. Two are complete
4b: Include two lessons demonstrating research used and how to test for and build on prior knowledge NCTM 8.6 (03) NCTM 4b	Two lessons show how you research your class and plan according to their needs, use best practices, include formative assessments, and assess for prior knowledge.	Two lessons show how you research your class and plan according to their needs, use best practices, include formative assessments	Two lessons show how you research your class and plan according to their needs, use best practices	Two lessons show how you research your class and plan according to their needs
4c: Include five researched strategies to increase student engagement/motivation NCTM 16.3 (03) NCTM 4c	Five strategies to motivate students to learn. The strategies demonstrate best practices. Use one strategy in a lesson and include a reflection on the impact.	Five strategies to motivate students to learn. The strategies demonstrate best practices. Use one strategy in a lesson	Four strategies to motivate students to learn. The strategies demonstrate best practices.	Four strategies to motivate students to learn.
4d: Include the FEE from all taught lessons NCTM 16.3 NCTM 4d	Include all FEEs from lessons taught. FEEs show that you impact student learning. Reflect on your growth over time. Identify one area for growth.	Include all FEEs from lessons taught. FEEs show that you impact student learning. Reflect on your growth over time.	Include all FEEs from lessons taught. FEEs show that you impact student learning.	Include all FEEs from lessons taught. FEEs show that you are weak in some areas.



<p>4e: Include two lessons that utilize a variety of resources and math-specific technology and annotated list of five resources or technology NCTM 6.1 (03) NCTM 4e</p>	<p>Two lessons that use multiple math-specific technologies and resources. Make a list of five important resources or technology. Reflect on how technology enriches math and invites learning.</p>	<p>Two lessons that use multiple math-specific technologies and resources. Make a list of five important resources or technology.</p>	<p>Two lessons that use math-specific technology and resources. Make a list of five important resources or technology.</p>	<p>Two lessons that use math-specific technology or resources.</p>
<b>Professional Section of Math notebook:</b>				
<p>6a: Include the review of two scholarly journal articles. Include membership in one professional organization (TEA, SCASCD, Beta Delta, NCTM) Include Professional development activity sheet from methods Include the professional development plan Include at least one professional conference attended AOD self-assessment Resume, cover letter, business card, photo Self-assessment of Teaching Performance. Philosophy of Mathematics Education NCTM 8.5 NCTM 6a</p>	<p>Demonstrate your personal growth through the reading of research, professional memberships, a plan for development, attending conferences, and materials needed for an interview. Include your personal philosophy of education that is of high quality. Include your self-evaluation of AOD and choose one area for growth. Include your interview portfolio items that are high quality and professional.</p>	<p>Demonstrate your personal growth through the reading of research, professional memberships, a plan for development, attending conferences, and materials needed for an interview. Include your personal philosophy of education that is of high quality.</p>	<p>Demonstrate your personal growth through at least three of the following: the reading of research, professional memberships, a plan for development, attending conferences, and materials needed for an interview. Include your personal philosophy of education.</p>	<p>Demonstrate your personal growth through at least two of the following: the reading of research, professional memberships, a plan for development, attending conferences, and materials needed for an interview. Include your personal philosophy of education.</p>
<p>6b. List collaborative efforts or professional seminars attended And reflections NCTM 6b</p>	<p>Make a list of opportunities where you have collaborated with professionals, attended professional seminars, and reflected on your experience.</p>	<p>Make a list of opportunities where you have collaborated with professionals, attended professional seminars.</p>	<p>Make a list of opportunities where you have collaborated with professionals or attended professional seminars.</p>	<p>Listed only one collaboration or seminar.</p>

<p>6c: Two research article reviews. List your professional memberships NCTM 8.5 (03) NCTM 6c</p>	<p>Two research article reviews that demonstrate your ability to understand research, and an insightful reflection including how you would put it into practice or link it to a lesson where you applied the research. List at least one professional membership.</p>	<p>Two research article reviews that demonstrate your ability to understand research</p>	<p>One research article review that demonstrate your ability to understand research</p>	<p>One research article review</p>
<b>Unit Plan Assessment</b>				
<p>5a. Getting to know the students in the class</p>	<p>Describe the students and purpose of your student impact project. Include demographics on the students in the project. Explain how you collaborated with your cooperating teacher in choosing the students and the purpose of the project.</p>	<p>Describe the students and purpose of your student impact project. Include demographics on the students in the project.</p>	<p>Describe the students and purpose of your student impact project.</p>	<p>Describe the students in the project.</p>
<p>5b: Planning using demographics and personal connections to the lessons NCTM 7.5 NCTM 5b</p>	<p>Make a personal connection with the students and discover their interests. Create a pre-test or use data from a test and analyze the problem areas. Use the data to plan four lessons for the students. Keep the results to compare with the post-test. Identify learning needs of the students, student interests and research when planning the lessons.</p>	<p>Make a personal connection with the students and discover their interests. Create a pre-test or use data from a test and analyze the problem areas. Use the data to plan four lessons for the students. Keep the results to compare with the post-test.</p>	<p>Make a personal connection with the students and discover their interests. Create a pre-test or use data from a test and analyze the problem areas. Use the data to plan four lessons for the students.</p>	<p>Make a personal connection with the students and discover their interests. Create a pre-test or use data from a test and analyze the problem areas.</p>

<p>5c: Planning the lessons based on assessment and student interests. NCTM 8.6 NCTM 5b</p>	<p>Describe the Lessons demonstrating mathematics connected to life and student interests. Outline your lessons as you carried them out in the Student Impact Project. Describe the formative assessments and how you used them to plan the following lesson. Describe how you tailored the lessons to student needs and interests.</p>	<p>Describe the Lessons demonstrating mathematics connected to life and student interests. Outline your lessons as you carried them out in the Student Impact Project. Describe the formative assessments and how you used them to plan the following lesson.</p>	<p>Describe the Lessons demonstrating mathematics connected to life and student interests. Outline your lessons as you carried them out in the Student Impact Project.</p>	<p>Describe the Lessons demonstrating mathematics connected to life and student interests.</p>
<p>5d. Using student data to determine impact on learning and future lessons NCTM 16.3 NCTM 5c</p>	<p>Show the pre- and post-test of the student impact project. Show the analysis of assessment related to each lesson. Include any and all data from assessments used in the student impact project. What did you learn from the impact project? Describe the student gains as a result of your lessons. What might you do differently next time?</p>	<p>Show the pre- and post-test of the student impact project. Show the analysis of an assessment related to each lesson. Include any and all data from assessments used in the student impact project. What did you learn from the impact project? Describe the student gains as a result of your lessons.</p>	<p>Show the pre- and post-test of the student impact project. Show the analysis of an assessment related to each lesson. Include any and all data from assessments used in the student impact project. What did you learn from the impact project?</p>	<p>Show the pre- and post-test of the student impact project. Show the analysis of an assessment related to each lesson. Include any and all data from assessments used in the student impact project.</p>
<p>5e: Final in-depth reflection NCTM 16.3 NCTM 5c</p>	<p>Create a summary reflection of all lessons taught and what changes you would make to increase student engagement and learning. Include a final in-depth reflection on what you learned through the process and what gains students achieved in the project.</p>	<p>Create a summary reflection of all lessons taught and what changes you would make to increase student engagement and</p>	<p>Create a summary reflection of all lessons taught and what changes you would make to increase student engagement and</p>	<p>Create a summary reflection of all lessons taught and what changes you would make to increase student</p>

	<p>Evaluate whether the project was a success and identify what you would change in the future.</p>	<p>learning. Include a final in-depth reflection on what you learned through the process and what gains students achieved in the project. Evaluate whether the project was a success.</p>	<p>learning. Include a final in-depth reflection on what you learned through the process and what gains students achieved in the project.</p>	<p>engagement and learning.</p>
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## Resume Assessment and Scoring Guide

Candidates will prepare a professional resume utilizing a professional resume template.

The resume should include full details of contact information, objective or mission statement, education, work experience, awards or certifications, professional memberships, special abilities such as languages spoken, etc.

The resume will be graded and critiqued and given to a faculty member with whom you will be scheduled for a mock interview. NCTM 6a, APS 10

Scoring guide:

Criteria	Unsatisfactory 1	Needs Improvement 2	Proficient 3	Exemplary 4
Template and appearance	Not professional	Some errors in layout	Looks professional, but lacks appeal	Outstanding in appeal, layout, information included
Contact information	Information incomplete or errors	Has some contact information	Has all information	Has all contact information in a good format free of errors
Education and work experience	Education	Education and experience	Education and experience in detail	Has all information in a good format free of errors
Awards, certifications, special abilities/ use of technology	Shows 1	Shows 2	Shows 3	Shows all competencies
Objective or mission statement	None	Has the objective	Has a clear and concise mission statement	Has a well written and error-free. mission statement
Professional associations/Seminars NCTM 6c	None	Belongs to a professional organization or attended a seminar	Belongs to a professional organization and attended a seminar	Belongs to professional organizations and attends seminars

Reviewer: ..... Date..... Score.....

**Mock Interview Rubric:**

<b>Criteria</b>	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
<b>1. Professional Knowledge</b> NCTM 6b APS 10 COE 3a	Candidate demonstrates knowledge related to education and the teaching profession. Answers questions with understanding and knowledge. Answers questions showing depth of experience.	Candidate demonstrates knowledge related to education and the teaching profession. Answers questions with understanding and knowledge	Candidate answers questions with knowledge. May not understand all questions.	Candidate does not answer the question or seems confused by the question.
<b>2. Professional dispositions</b> NCTM 6b APS 10 COE 3a	Candidate is poised, uses good eye contact, demonstrates confidence, appropriately dressed, demonstrates appropriate social manners.	Candidate is poised, uses good eye contact, demonstrates confidence, appropriately dressed.	Candidate demonstrates some social manners, but is not confident or poised.	Candidate does not demonstrate composure or social manners.
<b>3. Professional goals</b> NCTM 6a APS 10 COE 3a	Candidate answers questions related to professional goals. Has 3-4 goals in mind and can discuss professional development needs through self-assessment. Asks good questions about the position.	Candidate answers questions related to professional goals. Has 3-4 goals in mind. Asks good questions about the position.	Candidate answers questions related to professional goals. Has 1 -2 goals in mind but does not include self-assessment of needs.	Candidate does not answer questions related to professional goals or self-assessment.

Name..... score.....

**Secondary Mathematics Seminar Presentation:**

Candidate \_\_\_\_\_ Score \_\_\_\_\_

The purpose of the presentation is to assure the faculty that the candidate has indeed been prepared to teach. The candidate will address the following areas including evidence and narrative. The jury will weigh the evidence and score each area. Please rate the presentation narrative as one score and the evidence as a different score.

Exemplary 4	Proficient 3	Needs Improvement 2	Unsatisfactory 1
4	3	2	1

The candidate demonstrates mastery in the following areas:

Criteria	Presentation	Evidence
<b>Outcome I: Effective Practitioner</b>		
1. In-depth knowledge of content. NCTM 1a, APS 6, CF 1a		
2. In-depth understanding of mathematical processes: problem-solving. NCTM 2a, APS 6, CF 1a NCTM 1.4 (03)		
3. Pedagogical knowledge related to teaching content and processes NCTM 3a, APS 5, CF 1F		
4. The ability to plan NCTM 3c, APS 2, CF 1D		
5. The ability to assess learning NCTM 3f, APS 3, CF 1C		
6. The ability to analyze performance NCTM 3g, APS 7, CF 3B		
7. Impacting student learning NCTM 5a, APS 7, CF 3B		
8. The ability to differentiate learning for exceptional, ELL, Gifted NCTM 4c, APS 4, CF 1D		
<b>Outcome II: Caring Leader</b>		
9. Classroom management NCTM 4d, APS 9, CF 2C		
10. Building productive relationships with students NCTM 5b, CF3C		
11. Demonstrating fairness to all students NCTM 4d, APS 4, CF2A		
12. Making expectations known NCTM 3e, APS 4, CF2B		
<b>Outcome III: Lifelong Learner</b>		
13. Professional growth NCTM 6a, APS 10, CF3A		
14. Professional Development Plan NCTM 6b, APS 10, CF3A		
15. Professional Demeanor NCTM 6a (Presentation dress and deportment.)		

Comments: \_\_\_\_\_

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Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_



<b>Seminar Presentation Rubric:</b>				
<b>Criteria-Presentation</b>	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
<b>Outcome I: Effective Practitioner</b>				
1. In-depth knowledge of content. NCTM 1a, APS 6, CF 1a	Speaks with clarity, organizes thoughts, explains concepts, and engages the audience.	Speaks with clarity, organizes thoughts, explains concepts,	Speaks with clarity, organizes thoughts,	Speaks with clarity
2. In-depth understanding of mathematical processes: problem-solving. NCTM 2a, APS 6, CF 1a NCTM 1.4 (03)	Speaks with clarity, organizes thoughts, explains concepts, and engages the audience.	Speaks with clarity, organizes thoughts, explains concepts.	Speaks with clarity, organizes thoughts.	Speaks with clarity.
3. Pedagogical knowledge related to teaching content and processes NCTM 3a, APS 5, CF 1F	Speaks with clarity, organizes thoughts, explains concepts, and engages the audience.	Speaks with clarity, organizes thoughts, explains concepts.	Speaks with clarity, organizes thoughts.	Speaks with clarity.
4. The ability to plan NCTM 3c, APS 2, CF 1D	Speaks with clarity, organizes thoughts, explains concepts, and engages the audience.	Speaks with clarity, organizes thoughts, explains concepts.	Speaks with clarity, organizes thoughts.	Speaks with clarity.
5. The ability to assess learning NCTM 3f, APS 3, CF 1C	Speaks with clarity, shows how assessment is done, uses terminology, explains the process.	Speaks with clarity, shows how assessment is done, uses terminology.	Speaks with clarity, shows how assessment is done.	Speaks with clarity.
6. The ability to analyze performance NCTM 3g, APS 7, CF 3B	Speaks with clarity, organizes thoughts, explains techniques, and results of analysis.	Speaks with clarity, organizes thoughts, explains techniques.	Speaks with clarity, organizes thought.	Speaks with clarity.
7. Impacting student learning NCTM 5a, APS 7, CF 3B	Speaks with clarity, explains processes, gives compelling examples, and results.	Speaks with clarity, explains processes, gives compelling examples.	Speaks with clarity, explains processes.	Speaks with clarity.
8. The ability to differentiate learning for exceptional, ELL, Gifted NCTM 4c, APS 4, CF 1D	Speaks with clarity, explains processes, gives compelling examples, and results.	Speaks with clarity, explains processes, gives compelling examples.	Speaks with clarity, explains processes.	Speaks with clarity.
<b>Outcome II: Caring Leader</b>				

9. Classroom management NCTM 4d, APS 9, CF 2C	Speaks with clarity, explains the processes, gives examples, and demonstrates understanding.	Speaks with clarity, explains the processes, gives examples.	Speaks with clarity, explains the processes.	Speaks with clarity.
10. Building productive relationships with students NCTM 5b, CF3C	Speaks with clarity, explains processes, gives compelling examples, and results.	Speaks with clarity, explains processes, gives compelling examples.	Speaks with clarity, explains processes.	Speaks with clarity.
11. Demonstrating fairness to all students NCTM 4d, APS 4, CF2A	Speaks with clarity, explains fairness, gives compelling examples, and checks for biases.	Speaks with clarity, explains fairness, gives compelling examples.	Speaks with clarity, explains fairness.	Speaks with clarity.
12. Making expectations known NCTM 3e, APS 4, CF2B	Speaks with clarity, explains expectations, gives compelling examples, and practices.	Speaks with clarity, explains expectations, gives compelling examples.	Speaks with clarity, explains expectations.	Speaks with clarity.
<b>Outcome III: Lifelong Learner</b>				
13. Professional growth NCTM 6a, APS 10, CF3A	Speaks with clarity, explains growth, gives examples, and demonstrates how they have grown professionally.	Speaks with clarity, explains growth, gives examples.	Speaks with clarity, explains growth.	Speaks with clarity.
14. Professional Development Plan NCTM 6b, APS 10, CF3A	Speaks with clarity, explains the plan, gives examples, and shows progress.	Speaks with clarity, explains the plan, gives examples.	Speaks with clarity, explains the plan.	Speaks with clarity.
15. Professional Demeanor NCTM 6a (Presentation dress and deportment.)	Speaks with clarity, demonstrates poise and confidence, dressed appropriately, makes good eye contact during the presentation.	Speaks with clarity, demonstrates poise and confidence, dressed appropriately.	Speaks with clarity, demonstrates poise and confidence.	Speaks with clarity.

<b>Criteria: Evidence</b>	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
<b>Outcome I: Effective Practitioner</b>				

1. In-depth knowledge of content. NCTM 1a, APS 6, CF 1a	Evidence is appropriate, demonstrates knowledge, is adequate, and compelling.	Evidence is appropriate, demonstrates knowledge, is adequate.	Evidence is appropriate, demonstrates knowledge.	Evidence is appropriate.
2. In-depth understanding of mathematical processes: problem-solving. NCTM 2a, APS 6, CF 1a NCTM 1.4 (03)	Evidence is appropriate, demonstrates ability to teach practices, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to teach practices, is adequate.	Evidence is appropriate, demonstrates ability to teach practices.	Evidence is appropriate.
3. Pedagogical knowledge related to teaching content and processes NCTM 3a, APS 5, CF 1F	Evidence is appropriate, demonstrates ability to teach, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to teach, is adequate.	Evidence is appropriate, demonstrates ability to teach.	Evidence is appropriate.
4. The ability to plan NCTM 3c, APS 2, CF 1D	Evidence is appropriate, demonstrates ability to plan, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to plan, is adequate.	Evidence is appropriate, demonstrates ability to plan.	Evidence is appropriate.
5. The ability to assess learning NCTM 3f, APS 3, CF 1C	Evidence is appropriate, demonstrates ability to assess learning, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to assess learning, is adequate.	Evidence is appropriate, demonstrates ability to assess learning.	Evidence is appropriate.
6. The ability to analyze performance NCTM 3g, APS 7, CF 3B	Evidence is appropriate, demonstrates ability to analyze data, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to analyze data, is adequate.	Evidence is appropriate, demonstrates ability to analyze data.	Evidence is appropriate.
7. Impacting student learning NCTM 5a, APS 7, CF 3B	Evidence is appropriate, demonstrates ability to impact learning, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to impact learning, is adequate.	Evidence is appropriate, demonstrates ability to impact learning.	Evidence is appropriate.
8. The ability to differentiate learning for exceptional, ELL, Gifted NCTM 4c, APS 4, CF 1D	Evidence is appropriate, demonstrates ability to differentiate, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to differentiate, is adequate.	Evidence is appropriate, demonstrates ability to differentiate.	Evidence is appropriate.
<b>Outcome II: Caring Leader</b>				

9. Classroom management NCTM 4d, APS 9, CF 2C	Evidence is appropriate, demonstrates ability to manage a classroom, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to manage a classroom, is adequate.	Evidence is appropriate, demonstrates ability to manage a classroom.	Evidence is appropriate.
10. Building productive relationships with students NCTM 5b, CF3C	Evidence is appropriate, demonstrates ability to build appropriate relationships, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to build appropriate relationships, is adequate.	Evidence is appropriate, demonstrates ability to build appropriate relationships.	Evidence is appropriate.
11. Demonstrating fairness to all students NCTM 4d, APS 4, CF2A	Evidence is appropriate, demonstrates ability to practice fairness, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to practice fairness, is adequate.	Evidence is appropriate, demonstrates ability to practice fairness.	Evidence is appropriate.
12. Making expectations known NCTM 3e, APS 4, CF2B	Evidence is appropriate, demonstrates ability to make expectations known, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to make expectations known, is adequate.	Evidence is appropriate, demonstrates ability to make expectations known.	Evidence is appropriate.
<b>Outcome III: Lifelong Learner</b>				
13. Professional growth NCTM 6a, APS 10, CF3A	Evidence is appropriate, demonstrates ability to develop as a professional, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to develop as a professional, is adequate.	Evidence is appropriate, demonstrates ability to develop as a professional.	Evidence is appropriate.
14. Professional Development Plan NCTM 6b, APS 10, CF3A	Evidence is appropriate, demonstrates ability to create a development plan, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to create a development plan, is adequate.	Evidence is appropriate, demonstrates ability to create a development plan.	Evidence is appropriate.
15. Professional Demeanor NCTM 6a (Presentation dress and deportment.)	Evidence is appropriate, demonstrates ability to demonstrate professional demeanor, is adequate, and compelling.	Evidence is appropriate, demonstrates ability to demonstrate	Evidence is appropriate, demonstrates ability to demonstrate	Evidence is appropriate.

		professional demeanor, is adequate.	professional demeanor.	
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	<b>Exemplary 4</b>	<b>Proficient 3</b>	<b>Needs Improvement 2</b>	<b>Unsatisfactory 1</b>
<b>Oral grammar</b> 1/4 (25%) APS 6 CF.1.B	Has no errors in spoken grammar. Uses appropriate sentence construction. Avoids vague language such as "thing". Crafts arguments that are convincing.	Has fewer than three errors in spoken grammar. Uses appropriate sentences structure. Does not use many fillers.	Has fewer than six errors in spoken grammar. Uses adequate sentence construction. May use vague language such as "thing."	Has more than six errors in spoken grammar. Uses inappropriate sentence construction. May use vague language such as "thing."
<b>Use of content</b> 1/4 (25%) APS 6 CF.1.B	Uses appropriate vocabulary and specialized terminology correctly. Presents accurate content in a compelling manner. Supports ideas with examples and research.	Uses appropriate vocabulary and specialized terminology correctly. Presents accurate content in a compelling manner.	Uses some specialized vocabulary. May seem unsure of details. Supports ideas with some examples and research.	Does not use specialized vocabulary. May seem unsure of details. Supports ideas with few examples and little research.
<b>Presentation Flow</b> 1/4 (25%) APS 6 CF.1.B	Presents a coherent speech with logical flow. Does not use fillers such as "uhm, like, okay, you know." Keeps the audience engaged.	Presents a coherent speech with logical flow. Does not use fillers such as "uhm, like, okay, you know."	Has a logical flow. May have minimal use of fillers such as "uhm, like, okay, you know."	Does not have a logical flow. May use fillers such as "uhm, like, okay, you know."
<b>Engages the audience</b> 1/4 (25%) APS 7 CF.3.D	Finds ways to engage the audience. Provokes thought and discussion. Reviews or demands a response to the topic or presentation.	Finds ways to engage the audience. Provokes thought and discussion or response.	Engages audience. May not offer opportunities for review or response.	Does not engage audience. Does not offer opportunities for review or response.

Comments: \_\_\_\_\_

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Evaluator \_\_\_\_\_ Course \_\_\_\_\_

**Math Addendum:** Student teacher: \_\_\_\_\_ School: \_\_\_\_\_  
 Courses observed: \_\_\_\_\_

Use your computer highlighter to select the score that best matches the performance of the student teacher.

1. Give examples of **specific technologies used in lessons** including calculators, construction equipment in Geometry, manipulatives, virtual manipulatives, and mathematical software.

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Rate the use of technology by the student using the rubric below:

Technology	Exemplary=4	Proficient=3	Needs Improvement=2	Unsatisfactory=1
Internet technologies NCTM 3c	Uses appropriate technologies that enhance understanding. Uses technology with ease. Uses a variety of internet resources to enhance learning.	Uses appropriate technologies that enhance understanding. Uses technology with ease.	Uses appropriate technologies that enhance understanding.	Uses technology
Calculators NCTM 3c	Able to use the technology with ease. Knows how to incorporate the technology in class. Able to explain the technology to students.	Able to use the technology with ease. Knows how to incorporate the technology in class.	Able to use the technology with ease.	Able to use the technology.
Manipulatives And/or mathematical tools NCTM 4e	Adjusts lessons to include concrete learning methods, manipulatives, and/or mathematical tools such as ruler, protractor, compass, etc. Knows how to use them to enhance learning. Explains how to use them.	Adjusts lessons to include concrete learning methods, manipulatives, and/or mathematical tools such as ruler, protractor, compass, etc. Knows how to use them to enhance learning.	Adjusts lessons to include concrete learning methods, manipulatives, and/or mathematical tools such as ruler, protractor, compass, etc.	Adjusts lessons to include concrete learning methods.

2. Candidate includes historical notes in lessons.

Give an example of **a historical note** used in a lesson.

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Rate the candidate's inclusion of historical notes below.

Historical note	Exemplary=4	Proficient=3	Needs Improvement=2	Unsatisfactory=1
Candidate includes historical notes. NCTM 3d	Candidate includes historical contexts, mathematicians, different cultural contributions, or other relevant historical facts to enhance the study of mathematics.	Candidate includes historical facts or mathematicians.	Candidate makes references to a historical fact or mathematician.	Candidate may mention a historical note, but does not tie it to the lesson.



3. Impact on Student Learning.

Give examples how the candidate **impacted student learning**.

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Rate the candidate's ability to impact student learning,

<b>Impact on student learning</b>	<b>Exemplary=4</b>	<b>Proficient=3</b>	<b>Needs Improvement=2</b>	<b>Unsatisfactory=1</b>
Ability to make sense of assessment data NCTM 5c	Able to analyze and make sense of assessment data. Knows where students are weak. Adjusts lessons to address problems.	Able to analyze and make sense of data. Knows where students are weak.	Able to analyze and make sense of data.	Able to analyze data.
Ability to track student progress NCTM 5a	Follows student progress and communicates with students and other relevant parties. Seeks to keep students moving forward in mathematical understanding.	Follows student progress and communicates with students and other relevant parties.	Follows student progress and communicates with students.	Follows student progress.
Ability to monitor and adjust to meet student needs NCTM 5b	Develops strategies to help struggling students, adds complexity for gifted students, able to help English Language learners, Adjusts to meet student needs.	Develops strategies to help struggling students, adds complexity for gifted students, able to help English Language learners,	Develops strategies to help struggling students, adds complexity for gifted students,	Develops strategies to help struggling students
Meeting the needs of struggling or diverse learners NCTM 5b	Finds strategies to help struggling students learn. Communicates the belief that all students can learn. Offers help before or after school. Offers alternative assignments.	Finds strategies to help struggling students learn. Communicates the belief that all students can learn. Offers help before or after school.	Finds strategies to help struggling students learn. Communicates the belief that all students can learn	Communicates the belief that all students can learn

#### 4. Teacher-Student Discourse

Please give an example of how this candidate engaged students in explaining, discussing, and questioning in mathematics.

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Please rate the candidate on the following communication skills with students.

<b>Discourse</b>	<b>Exemplary=4</b>	<b>Proficient=3</b>	<b>Needs Improvement=2</b>	<b>Unsatisfactory=1</b>
Candidate uses Standard English when teaching.	Candidate makes fewer than three grammatical errors	Candidate makes fewer than six grammatical errors	Candidate makes fewer than nine grammatical errors	Candidate may make fewer than 12 grammatical errors.
Candidate teaches correct content and uses precise mathematical vocabulary. NCTM 2d	Candidate makes fewer than three errors in discussing content or using vocabulary.	Candidate makes fewer than six errors in discussing content or using vocabulary.	Candidate makes fewer than nine errors in discussing content or using vocabulary.	Candidate makes fewer than 12 errors in discussing content or using vocabulary.
Candidate engages students in discussion through appropriate questioning NCTM 3d	Candidate engages students in discussion by using questioning, show me strategies, student presentations or board work, and electronic strategies.	Candidate engages students in discussion by using questioning, show me strategies, student presentations or board work	Candidate engages students in discussion by using questioning, show me strategies,	Candidate engages students in discussion by using questioning,
Students are engaged in mathematics. NCTM 3d	Students are answering and asking questions. Students are demonstrating their knowledge. Students are defending their work. Students are working together and talking about mathematics.	Students are answering and asking questions. Students are demonstrating their knowledge. Students are defending their work.	Students are answering and asking questions. Students are demonstrating their knowledge.	Students are answering and asking questions.

5. Demonstrate interconnectedness of mathematical ideas and how they build upon each other. Makes connections across domains (i.e., subject areas) and to real-world contexts.

Give an example of how the candidate made such connections while teaching:

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<b>Criterion</b>	<b>Exemplary=4</b>	<b>Proficient=3</b>	<b>Needs Improvement=2</b>	<b>Unsatisfactory=1</b>
Connects lesson to previous learning and future learning and across domains.	Reminds students of previous lessons, Checks for prior knowledge, connects to future lessons, connects to other domains.	Reminds students of previous lessons, Checks for prior knowledge, connects to future lessons,	Reminds students of previous lessons, Checks for prior knowledge,.	Reminds students of previous lessons,
Demonstrates how mathematics builds within the domain and across domains	Builds knowledge through increasing difficulty, adding domains or practices, adding rigor, applying to real world.	Builds knowledge through increasing difficulty, adding domains or practices, adding rigor.	Builds knowledge through increasing difficulty, adding domains or practices.	Builds knowledge through increasing difficulty.

6. Candidate connects the domains (subject areas) with the mathematical practices of problem-solving, reasoning, communicating, connecting, and representing.

Give an example of how the candidate used the practices in a lesson to make connections:

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<b>Criterion</b>	<b>Exemplary=4</b>	<b>Proficient=3</b>	<b>Needs Improvement=2</b>	<b>Unsatisfactory=1</b>
Models the mathematical practices and uses them in lessons	Candidate is confident in use of practices, explains the practices and connects them to lessons, talks about thinking when using the practices.	Candidate is confident in use of practices, explains the practices and connects them to lessons.	Candidate is confident in use of practices, explains the practices.	Candidate is confident in use of practices.
Demonstrates the interconnectedness of	Candidate demonstrates how	Candidate demonstrates how	Candidate demonstrates how	Candidate demonstrates how

processes and domains	practices and domains connect. Explains the connections. Uses multiple types of practices and connects to other domains.	practices and domains connect. Explains the connections. Uses multiple types of practice.	practices and domains connect. Explains the connections.	practices and domains connect.
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EXTRA: Can you identify any particular strengths in this candidate? Can you identify any particular areas for improvement? Add pages if needed.

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**Student Teaching Requirement:**

Supervisors will also add **two Field Experience Evaluations** to the Student Teaching Evaluations.