

Potential Equivalent Courses for UNC's MAT Prerequisites for Elementary/Special Education

Math Courses (MATH 307):

North Carolina State University

MA 101 – Intermediate Algebra

Course Description: Preparation for MA 103, MA 105, MA 107, MA 111, and MA 114.

Reviews main topics from high school Algebra I and Algebra II emphasizing functions and problem solving. Other concepts and skills covered include algebraic operations, factoring, linear equations, graphs, exponents, radicals, complex numbers, quadratic equations, radical equations, inequalities, systems of equations, compound inequalities, absolute value in equations and inequalities.

East Carolina University

MATE 3067 - Algebra and Number Foundations

Course Description: Investigations of number and algebra concepts to obtain a deeper understanding of their properties and interconnections in K-8 mathematics.

MATE 2129 - Investigations into Concepts of Elementary Mathematics

Course Description: For elementary education majors. Investigations into concepts of elementary school geometry, measurement, and data.

MATE 3223 - Teaching Mathematics in the Elementary Grades K-6

Course Description: 2 lectures and 2 lab hours per week. P: Admission to upper division; MATE 2129. Techniques and methods for teaching mathematics to students in grades K-6. Lab provides a deeper understanding of mathematical concepts and experience with materials and methods appropriate for classroom work.

Western Carolina University

MATH 221 - Number Sense for Teaching

Course Description: Numeration systems; quantitative reasoning with integers, rationals, irrationals, and reals; number theory.

UNC Charlotte

MATH 1340 - Mathematics for Elementary Teachers I

Course Description: Develops elementary teachers' understanding of essential concepts of real numbers and algebra. Students re-conceptualize their understanding of number systems, operations in these systems, and their properties. Helps develop students' understanding of functions and their applications to real-life situations.

MATH 1341 - Mathematics for Elementary Teachers II

Course Description: Develops elementary teachers' understanding of fundamental concepts of geometry, measurement, and data. Students re-conceptualize definitions and properties of polygons and polyhedral including the concepts of perimeter, area, surface area, volume, transformation, and congruence and similarity. Helps develop students' understanding of the organization, representation, and analysis of data, measures of central tendency and variation, and basic concepts of probability.

Appalachian State University

C I 5926 - Rational Numbers and Operations: K-5 Learning Trajectories (CTE course)

Course Description: Focus on rational number concepts through learning trajectories at the K-5 level; attention also given to problem solving and content knowledge.

MAT 5971 - Number Systems and Algebra for Middle Grades Teachers

Course Description: Designed primarily for teachers of mathematics at Grades 6-8, this course is a deep and connected study of number and operations, and of algebra, including rational numbers, proportional reasoning, and linear relations. Emphasis will be on rich tasks using representational tools and models to explore mathematical relationships. Problem solving, reasoning and proof, and mathematical communication will also be emphasized. Does not count for the Master of Arts in Mathematics.

Prerequisite: Enrollment in the Master of Arts in Middle Grades Education program or permission of the instructor.

North Carolina Central University

EDU 3520 - Teaching Mathematics (3)

Course Description: This course prepares teacher candidates to teach mathematics in elementary schools. The focus of this course will be on understanding mathematical concepts and developing appropriate lessons and strategies for teaching mathematical concepts to all children. An emphasis is placed on meeting the needs of all learners in culturally diverse educational environments. Field experience is required.

Winston-Salem State University

ELE 2301 - Math in Today's Elementary Classroom

Course Description: This course is designed to provide education majors, who plan to teach in elementary schools, an opportunity to deepen their elementary mathematics knowledge and understanding in order to advance the knowledge and skills needed to effectively teach math concepts to young child through grade six. Mathematical concepts will be presented in a developmental sequence that supports children's construction of the concepts essential to

understanding mathematics. Specifically, each new concept will be introduced with concrete materials and exploratory activities that candidates can implement in an elementary classroom. Topics include problem solving, sets, logic, functions, numeration systems, real number system and number theory utilized within an elementary classroom setting.

Elizabeth City State University

MATH 121 NUMBER SYSTEMS AND ALGEBRA

Course Description: Designed for prospective elementary and middle school teachers. Emphasis on numeric and algebraic concepts, with applications to teaching. Topics include: sets; number systems and operations and properties of number; equations and inequalities; functions and graphs; appropriate use of technology; historical/cultural perspectives.

ELEM 430 MATHEMATICS METHODS IN THE INCLUSIVE CLASSROOM

Course Description: Mathematical assessment and instruction of diverse students, including numbers and operations, algebra, geometry, measurement, data analysis, and probability. Instructional approaches will include inquiry and direct instruction and will emphasize systematic presentation that moves from concrete to abstract and utilizes multi-sensory activities.

Linguistics Courses (LING 101)

East Carolina University

LING 3750 - Introductory Linguistics

Course Description: Methods and techniques of linguistic analysis. Sample problems on phonological, morphological, syntactic, graphemic, and historic reconstruction levels.

LING 4720 - Applied Linguistics for Language Teachers

Course Description: An overview of applied linguistics with emphasis on teaching English as a second or foreign language.

UNC Pembroke

ENG 5110 - Principles of English Linguistics

Course Description: A study of the English language as a system of rules operating at various levels (sound, word formation, syntax, and discourse) and how this system governs and explains our everyday use of the language. The course will focus on English but will also include analysis of examples from other languages of the world for comparative purposes.

Appalachian State University

LLC 5600 - Linguistics

Course Description: Study of sounds/intonation, word formation, syntax, semantics, pragmatics and their application to learning a second language. Different theoretical approaches will be explained. Students will apply linguistic concepts to problems in a variety of languages.

The course will also demonstrate how linguistics analyzes dialects and resolves problems of language learning and teaching.

Fayetteville State University

READ 370 - Linguistics and Reading

Course Description: This course focuses on the purposes of literacy instruction, which includes helping children develop their oral language skills, and describing how reading and writing develop. Emphasis is placed on providing a wide variety of activities for preschoolers to stimulate language development and literacy. Assessing children's progress in literacy is also addressed.

North Carolina Central University

ENG 2115 - Introduction to Linguistics

Course Description: An overview of patterns and use of language. Includes discussion of elements of language (including sound systems, word formation, and syntax), historical change, and social/psychological elements (including social influences and language acquisition).

UNC Greensboro

ENG 321 Linguistics for Teachers

Course Description: Introduction to formal study of the English language, including intensive review of structural and transformational grammars. Other topics of interest to teachers of English, including geographical and social dialects and teaching composition. Course satisfies a Program requirement for prospective English teachers.

Elizabeth City State University

ENGL 327 HISTORY OF THE ENGLISH LANGUAGE

Course Description: The development of English sounds, pronunciations, spellings, etymology, syntax, and usage, from Old English to the present.

Child Development Courses (EDUC 532/PSYC 250)

Western Carolina University

BK 363 - Child Development

Course Description: Physical, emotional, social, and mental development from birth through middle childhood. 2 Lecture, 2 Lab.

UNC Pembroke

ELE 2010. Child Development and Cultural Dynamics

Course Description: This course focuses on conceptualizing the profession of teaching through the specific development, nurturing relationships and shared responsibility of educating children at the elementary school. Establishing ways in which learning takes place in elementary settings for the appropriate levels of intellectual, physical, social, and emotional development of elementary students. Through this course, students will prepare to build partnerships with all

segments of the school culture including parents, school and the community with effective family and community involvement.

UNC Asheville

PSYC 319 - Educational Psychology

Course Description: An introduction to the principles of educational psychology. Topics include physical, cognitive, and psychosocial development in childhood and adolescence, theories of learning, individual differences such as intelligence and motivation, and assessment and evaluation. Theory and research will be used to understand and explain learning and development, as well as devise strategies to promote optimal learning and development. Projects will focus on the potential classroom application of key concepts and theories.

Prerequisite: EDUC 210 or PSYC 100. Fall and Spring.

Fayetteville State University

EDUC 330 - Educational Psychology and Human Development

Course Description: An exploration of psychological principles and their applications to the problems of teaching and learning, including characteristics of stages in human development, theories of motivation and learning, classroom management strategies, individual differences, exceptional children, and the measurement and evaluation of student achievement and teaching strategies. Field experience required.

North Carolina Central University

FCSC 3000 - Middle Childhood and Adolescence

Course Description: A study of growth and development in middle childhood and adolescence (ages 6-18) with emphasis on theories and research in social, emotional, cognitive, and physical domains.

EDU 3010 - Human Growth and Development

Course Description: This is an introduction to the study of human growth from conception through early childhood, middle years, and adolescence. Emphasis is placed upon application of the basic concepts of physical, perceptual, mental, personality, social, language, emotional, and moral development of children and adolescents. Attention is given to the possible causes, characteristics and teacher detection of learning problems of special populations of children. Students examine how schools meet the developmental needs of their student populations by conducting in-school interviews with school personnel and at least one child. Ten hours of field experience are required.

Winston-Salem State University

BKE 2320 - Child Development

Course Description: This is a critical reading course that examines the typical and atypical development of children 0-8 years of age, with close attention to physical, social, emotional and cognitive behaviors and the theoretical and research-based rationales for each. Through careful analysis reflection and evaluation of the text, the distinct stages of development through which young children develop and the factors that influence typical and atypical development are

examined. A 10-hour field experience is required in which students observe and participate in reflective analysis of typical and atypical preschool and kindergarten settings serving children and their families. Students must demonstrate the ability to understand young children's development and the ability to recognize and respect the varying cultural contexts of children.

EDU 3311 - Child and Adolescent Development

Course Description: The course will examine the growth and development of the child from birth to twelve years. Emphasis will be placed on the whole child and all aspects of development: physical, mental, language, emotional, psychomotor, and social will be considered. Students will be introduced to various theories of the developmental process and will explore their implications for the classroom.