Learning, Teaching, & Curriculum (LTC)

LTC 1100: Orientation
This course familiarizes and orients students with MU resources, College of Education programs and expectations and career options. Graded on S/U basis only.

Credit Hour: 1

LTC 1110: Orientation: Art Education
This course familiarizes and orients students with MU resources, College of Education programs and expectations and career options, emphasizing Art Education. Graded on S/U basis only.

Credit Hour: 1

LTC 1120: Orientation: Math Education
This course familiarizes and orients students with MU resources, College of Education programs and expectations and career options, emphasizing Math Education. Graded on S/U basis only.

Credit Hour: 1

LTC 1130: Orientation: Middle School Education
This course familiarizes and orients students with MU resources, College of Education programs and expectations and career options, emphasizing Middle School Education. Graded on S/U basis only.

Credit Hour: 1

LTC 1155: Orientation: Science Education
This course familiarizes and orients students with MU resources, College of Education programs and expectations and career options, emphasizing Science Education. Graded on S/U basis only.

Credit Hour: 1

LTC 1170: Orientation: English/Language Arts
This course familiarizes and orients students with MU resources, College of Education programs, expectations and career options, emphasizing English/Language Arts education. Graded on S/U only.

Credit Hour: 1

LTC 1320: Scuba Theory
The curriculum of the class includes bio-physics, hydrostatic pressures, physiology, fundamentals of compressed gases, environmental conditions, mechanics, first aid as it relates to diving, and planning speciality dives such as decompression, night, cave, ice, salvage and wreck diving.

Credit Hours: 3

LTC 2040: Inquiring into Schools, Community and Society I
This course focuses on schooling in American society, the school community, the school culture and students' lives and identities. Studied are the political, cultural, and economic conditions of the schools.

Credit Hours: 3

LTC 2040H: Inquiring into Schools, Community and Society I - Honors
This course focuses on schooling in American society, the school community, the school culture and students' lives and identities. Studied are the political, cultural, and economic conditions of the schools.

Credit Hours: 3
Prerequisites: Honors eligibility required

LTC 2044: Early Field Experience for Teacher Education
This field experience course supports the Early Field Experience requirements for teacher education courses. Graded on S/U basis only.

Credit Hour: 1-2

LTC 2200: School Health and Student Wellbeing
This course will explore and analyze the critical role schools and teachers play to address students' physical, social, and emotional wellbeing. Research indicates that a healthy school environment can improve both academic and social outcomes. Focus areas include school safety, nutrition policy and health education.

Credit Hours: 3

LTC 4004: Field Experience
This course is a stand alone field experience for College of Education majors to gain additional experience inside the classroom. Graded on S/U basis only.

Credit Hour: 0-2

LTC 4050: Classroom Communities: Managing Collaboration for Learning
With an emphasis on prosocial education, this course offers an overview of strategies and skills for building community in the elementary and secondary classroom. Teacher candidates will explore the roles of empathy, culture, and support as they develop a professional philosophy and action plan for classroom management in their own teaching practice. Graded on A-F basis only.

Credit Hours: 3

LTC 4060: Teachers as Leaders: Policy, Ethics, and Advocacy
This course explores the intersections of policy, ethics, and advocacy within the context of education. Teacher candidates will examine various policies impacting education, ethical considerations in teaching practice, and strategies for advocacy to promote equitable learning environments. Graded on A-F basis only.

Credit Hour: 1

LTC 4085: Problems in Curriculum and Instruction
Studies professional programs and issues in health or physical education.

Credit Hour: 1-3
Recommended: instructor's consent

LTC 4085W: Problems in Curriculum and Instruction - Writing Intensive
Studies professional programs and issues in health or physical education.

Credit Hour: 1-3
Recommended: instructor's consent

LTC 4091: Assessment and Family Collaboration in Early Childhood Education
(cross-leveled with LTC 7091). Strategies for effectively observing and assessing young children and strategies for building positive family and community relationships, which support children's development and learning.

Credit Hours: 3
Prerequisites: Consent required (enrollment limited to students admitted to Phase II)

LTC 4110: Working with Infants and Toddlers
(cross-leveled with LTC 7110). Experience working with children aged 6 weeks to 2 1/2 years and their families. Opportunity to apply theories of cognitive, language, and social development.

Credit Hour: 2-3
Recommended: Admittance to Phase II

LTC 4114: Infant and Toddler Field Experience
Teacher candidates will visit a variety of infant and toddler programs to apply Working with Infants and Toddlers course content. Graded on S/U basis only.

Credit Hour: 1
Prerequisites or Corequisites: LTC 4110

LTC 4120: Early Childhood Education Literacy Methods & Assessment I
(cross-leveled with LTC 7120). Strategies for assessing and supporting young children's literacy development. Graded on A-F basis only. Recommended: admittance to College of Education required and co enrollment of LTC 4210 and LTC 4124: K-3 Field Experience.

Credit Hours: 3
Prerequisites: Consent of department required

LTC 4120W: Early Childhood Education Literacy Methods & Assessment I - Writing Intensive
(cross-leveled with LTC 7120). Strategies for assessing and supporting young children's literacy development. Graded on A-F basis only. Recommended: admittance to College of Education required and co enrollment of LTC 4210 and LTC 4124: K-3 Field Experience.

Credit Hours: 3
Prerequisites: Consent of department required

LTC 4124: Emergent and Developing Literacy Early Childhood Field Experience
This field experience provides hands-on opportunities for students to apply literacy development theories in early elementary classroom settings. Through guided observation and active participation, students support young learners' emergent reading and writing skills. Graded on A-F basis only.

Credit Hours: 2
Corequisites: LTC 4120 and LTC 4210
Recommended: Admittance to mid-level in Early Childhood Education

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LTC 4130: Teaching and Learning Math with Young Children
(cross-leveled with LTC 7130). Strategies for assessing and supporting young children's math learning. Includes strategies for home-school collaboration. Must take concurrently with K-3 field experience. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 4134
Recommended: Admittance to mid-level Early Childhood Education

LTC 4131: Teaching and Learning Science with Young Children
(cross-leveled with LTC 7131). Strategies for assessing and supporting young children's science learning. Includes strategies for home-school collaboration. Must take concurrently with K-3 field experience. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 4134

LTC 4132: Teaching and Learning Social Studies w/ Young Children
(cross-leveled with LTC 7132). Strategies for assessing and supporting young children's social studies learning. Includes strategies for home-school collaboration. Must take concurrently with K-3 field experience. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 4134

LTC 4134: Teaching & Learning Math, Sci & Soc Studies w/Young Children Field Experience
This field experience supports the LTC 4130 component of Phase II. Field experience expectations are delineated in the LTC 4130 course syllabi. Graded on a S/U basis only.

Credit Hours: 3
Corequisites: LTC 4130
Recommended: Admittance to Phase II

LTC 4140: Curriculum, Theory and Classroom Management in Early Childhood Education
(cross-leveled with LTC 7140). Reflection on the relationship of theory and practice in ECE. Consideration of various topics including historical influences on early childhood curriculum, models of early childhood curriculum, classroom management, and individualizing curriculum.

Credit Hours: 3
Prerequisites: Consent required (enrollment limited to students who have completed the first two semesters of Phase II)

LTC 4140W: Curriculum, Theory and Classroom Management in Early Childhood Education - Writing Intensive
(cross-leveled with LTC 7140). Reflection on the relationship of theory and practice in ECE. Consideration of various topics including historical influences on early childhood curriculum, models of early childhood curriculum, classroom management, and individualizing curriculum.

Credit Hours: 3
Prerequisites: Consent required (enrollment limited to students who have completed the first two semesters of Phase II)

LTC 4150: Early Childhood Education Literacy Teaching Methods and Assessment II
(cross-leveled with LTC 7150). Advanced strategies for assessing and supporting young children's literacy development.

Credit Hours: 3
Prerequisites: Consent of department required
Recommended: LTC 4120 or LTC 7120, LTC 4124 K-3 Field experience and admittance to the ECE certification program in Phase II of the College of Education required

LTC 4150W: Early Childhood Education Literacy Teaching Methods and Assessment II - Writing Intensive
(cross-leveled with LTC 7150). Advanced strategies for assessing and supporting young children's literacy development.

Credit Hours: 3
Prerequisites: Consent of department required
Recommended: LTC 4120 or LTC 7120, LTC 4124 K-3 Field experience and admittance to the ECE certification program in Phase II of the College of Education required

LTC 4160: Motor Development in Young Children
For Early Childhood majors. Study of young children's motor development.

Credit Hours: 2
Recommended: Admission to Phase II

LTC 4170: Program Management & Environmental Organization in PreKindergarten
Strategies for working with children aged 2-6 and their families. Emphasis on planning and implementing developmentally appropriate practice, designing effective learning environments, and managing programs.

Credit Hours: 3
Prerequisites: Consent required (enrollment limited to students admitted to Phase II, and completion of first 2 semesters of Phase II)
Recommended: Co-enrollment in LTC 4971 (Early Childhood section)

LTC 4194: Elementary Education Field Experience I
Seminars and diverse 1-5 grade classroom experience focus is on the learner and learning in the elementary school. Graded on a A-F basis only.

Credit Hour: 1-3
Recommended: Admittance to Phase II

LTC 4200: Young Children's Emergent Language
(cross-leveled with LTC 7200). For Early Childhood and Elementary Education majors. Study of young children's language development and implications for teachers.

Credit Hours: 2
Corequisites: LTC 4120, LTC 4124, and LTC 4210
Recommended: Admittance to Phase II

LTC 4210: Children's Language and Literature
(cross-leveled with LTC 7210). For Early Childhood Education majors. Examines children's oral language development and surveys the field of children's literature for children ages birth to eight. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 4120 and LTC 4124
Recommended: Admittance to Phase II

LTC 4211: Literacy Assessment and Development
Focus is on the development, assessment, and instruction of reading and writing motivations, skills, and strategies of diverse learners with emphasis on data interpretation and instruction. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4221: Contexts and Methods for Elementary Reading Instruction
Students will closely explore the different contexts, methods, and materials for reading instruction in diverse settings. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4231: Contexts and Methods for Writing Instruction
This course explores contexts and methods for writing instruction, with a focus on writing development, writing across the content, and multimodal and multilingual composition. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4231W: Contexts and Methods for Writing Instruction - Writing Intensive
This course explores contexts and methods for writing instruction, with a focus on writing development, writing across the content, and multimodal and multilingual composition. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4240: Art for Children
(cross-leveled with LTC 7240). This course focuses on appropriate teaching methods and strategies for teaching art (studio, art history, aesthetic, and criticism), artistic development of children, and curriculum, instructional, and organization strategies for the art classroom.

Credit Hours: 2
Recommended: Admittance to Phase II

LTC 4241: Diverse Literature for Children and Youth
Reading and discussion of diverse literature within a wide variety of genres will allow students to explore issues of diversity as related to elementary instruction. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4241W: Diverse Literature for Children and Youth - Writing Intensive
Reading and discussion of diverse literature within a wide variety of genres will allow students to explore issues of diversity as related to elementary instruction. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4250: Music for Children
Preparation of early childhood and elementary education students with the skills, knowledge, and philosophical foundations necessary to integrate music into the early childhood and elementary curricula.

Credit Hours: 2
Recommended: MUSIC_NM 1608, MUSIC_NM 1612, MUSIC_NM 1618 or competency test; Admittance to Phase II

LTC 4260: Elementary Social Studies
To develop knowledge of social studies and the skills to teach elementary-level social studies in a multicultural and diverse community. The course is designed to provide the students with the skills to plan, implement, and evaluate culturally relevant teaching and learning processes for the elementary social studies classroom. Graded on A-F basis only.

Credit Hours: 3

LTC 4280: Teaching Science in Elementary Schools
Concepts, materials, methods in the elementary school program.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4294: Elementary Education Field Experience II
Seminars and diverse 1-5 grade classroom experiences focus is on the teacher and instruction in the elementary school. Graded on A-F basis only.

Credit Hour: 1-3
Recommended: Admittance to Phase II

LTC 4300: Learning and Teaching Elementary Grades Mathematics I
The purpose of this course is to explore the development of children's mathematical thinking, focusing on number and operations with whole numbers and early fractions. It also supports the development of skills for eliciting, interpreting, and responding to children's mathematical thinking. The course addresses issues of equity in mathematics teaching, focusing on structural sources of inequity (e.g., tracking) and an orientation toward recognizing and affirming children's mathematical strengths. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to the mid-level of the Elementary Education program

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LTC 4310: Learning and Teaching Elementary Grades Mathematics II
The purpose of this course is to develop skill in facilitating mathematical discourse that builds on children's mathematical thinking and the use of teaching practices that provide all children with opportunities to learn important mathematics, with a focus on fraction operations, measurement, and geometry. The course addresses issues of equity in mathematics teaching, focusing on deconstructing dominant narratives about mathematical competence and using practices that highlight the contributions of marginalized children. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to the mid-level of the Elementary Education program, LTC 4300

LTC 4320: Middle School Social Studies I
Curriculum decision making, instructional planning, techniques and strategies, materials selection, approaches to assessment in middle level social studies, all based upon early adolescent growth and development principles.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4324: Middle School Social Studies Field I
This field experience supports the LTC 4320 component of Phase II for MS students. Field experience expectations are delineated in the LTC 4320 course syllabi. Graded on S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4334: Middle School Social Studies Field Experience II
This field experience supports the LTC 4550 component of Phase II for MS students. Field experience expectations are delineated in the LTC 4550 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4340: Middle School Science I
(cross-leveled with LTC 7340). Concepts, materials, methods in middle school program.

Credit Hours: 4
Prerequisites: Consent required
Recommended: Admittance to Phase II

LTC 4340W: Middle School Science I - Writing Intensive
(cross-leveled with LTC 7340). Concepts, materials, methods in middle school program.

Credit Hours: 4
Prerequisites: Consent required
Recommended: Admittance to Phase II

LTC 4344: Middle School Science Field I
This field experience supports the LTC 4340 component of Phase II. Field experience expectations are delineated in the LTC 4340 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4350: Middle School Science II
(cross-leveled with LTC 7350). Concepts, materials, methods in the middle school program.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4354: Middle School Science Field Experience
This field experience supports the LTC 4350 component of Phase II. Field experience expectations are delineated in the LTC 4350 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4355: Middle School Science Methods III
The third course in the middle school-level science methods sequence focuses on current curriculum standards, curriculum planning, and assessment. The use of technology for science teaching is integrated. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 4340W, LTC 4350
Recommended: Admittance to Phase 2

LTC 4360: Intro. Teaching Mathematics in Middle and Secondary Schools
(cross-leveled with LTC 7360). Introduction to teaching mathematics including: professional mathematics teacher associations and journals, learning theories related to teaching mathematics, tools, and materials for teaching mathematics, curriculum and instructional strategies (middle and lower high school level), and techniques for assessing mathematical understanding.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4364: Intro. Teaching Math in Middle and Secondary School Field Experience
This field experience supports the LTC 4360 component of Phase II. Field experience expectations are delineated in the LTC 4360 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4370: Teaching and Modeling Middle School Mathematics
(cross-leveled with LTC 7370). Major issues/topics of the course include: nature of middle school students, lesson planning, developing and utilizing teaching strategies, assessment alternatives, teaching via problem solving and mathematical modeling, interdisciplinary strategies and materials, and techniques for assessing mathematical understanding.

Credit Hours: 3
Prerequisites: LTC 4360 or LTC 7360 and LTC 4581 or 7581
Recommended: Admittance to Phase II and at least 18 credit hours of required mathematics

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LTC 4370W: Teaching and Modeling Middle School Mathematics - Writing Intensive
(cross-leveled with LTC 7370). Major issues/topics of the course include: nature of middle school students, lesson planning, developing and utilizing teaching strategies, assessment alternatives, teaching via problem solving and mathematical modeling, interdisciplinary strategies and materials, and techniques for assessing mathematical understanding.

Credit Hours: 3
Prerequisites: LTC 4360 or LTC 7360 and LTC 4581 or 7581
Recommended: Admittance to Phase II and at least 18 credit hours of required mathematics

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LTC 4374: Teaching and Modeling Middle School Mathematics Field Experience
This field experience supports the LTC 4370 component of Phase II. Field experience expectations are delineated in the LTC 4370 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4380: Teaching Middle School Language Arts I
(cross-leveled with LTC 7380). Integrates an understanding of literacy (highlighting reading) with content area demands, literature and other media texts, evaluation and inquiry within a context of diversity.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4384: Teaching Middle School Language Arts I Field Experience
This field experience supports the LTC 4380 component of Phase II. Field experience expectations are delineated in the LTC 4380 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4390: Teaching Middle and Secondary English/Language Arts II
(cross-leveled with LTC 7390). Prepares prospective educators with the knowledge, skills, and strategies necessary for integrating and teaching the English/Language Arts, primarily focusing on the teaching of writing and critical thinking.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4390W: Teaching Middle and Secondary English/Language Arts II - Writing Intensive
(cross-leveled with LTC 7390). Prepares prospective educators with the knowledge, skills, and strategies necessary for integrating and teaching the English/Language Arts, primarily focusing on the teaching of writing and critical thinking.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4394: Teaching Middle School Language Arts II Field Experience
This field experience supports the LTC 4390 component of Phase II. Field experience expectations are delineated in the LTC 4390 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4400: Teaching Middle and Secondary English/Language Arts III
(cross-leveled with LTC 7400). Prepare prospective educators by focusing on the teaching of American culture and critical thinking, through literacy, mediacy, oracy, and cultural artifacts.

Credit Hours: 3
Prerequisites: LTC 4380 or LTC 7380 and LTC 4390 or LTC 7390
Recommended: Admittance to Phase II

LTC 4404: Teaching Middle School Language Arts III Field Experience
This field experience supports the LTC 4400 component of Phase II. Field experience expectations are delineated in the LTC 4400 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4410: Teaching, Engaging and Assessing Middle-Level Students
(cross-leveled with LTC 7410). In this course students will learn about the specific and individual needs of middle-level students and develop the skills and understandings to meet these needs.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4410W: Teaching, Engaging and Assessing Middle-Level Students - Writing Intensive
(cross-leveled with LTC 7410). In this course students will learn about the specific and individual needs of middle-level students and develop the skills and understandings to meet these needs.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4414: Teaching, Engaging & Assessing Mid-Level Students Field Experience
This field experience supports the LTC 4410 component of Phase II. Field experience expectations are delineated in the LTC 4410 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4420: Adolescent Literacy
(cross-leveled with LTC 7420). Explores literacy implications of content areas. Topics include determining the difficulty of text, examining literature that supports content, creating alternative assessments, and evaluating reading/writing strategies as tools for learning. (Required of all students obtaining certification in middle school or concurrent certification in middle and secondary school area(s) except language arts.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4424: Middle School Literacy Field Experience
This field experience supports the LTC 4420 component of Phase II. Field experience expectations are delineated in the LTC 4420 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4460: Teaching English to Speakers of Other Languages
(same as LINGST 4650; cross-leveled with LTC 7460, LINGST 7650). Linguistic and pedagogical principles of teaching English to speakers of other languages. Graded A-F only.

Credit Hours: 3
Prerequisites: Consent required

LTC 4460H: Teaching English to Speakers of Other Languages - Honors
(cross-leveled with LTC 7460, LINGST 7650). Linguistic and pedagogical principles of teaching English to speakers of other languages. Graded A-F only.

Credit Hours: 3
Prerequisites: Consent required; Honors eligibility required

LTC 4470: Teaching Secondary English/Language Arts I
(cross-leveled with LTC 7470). Prepares prospective educators with the knowledge, skills, and strategies necessary for integrating and teaching the English/Language Arts, Primarily focusing on Young Adult Literature and critical thinking.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4474: Teaching Secondary English/Language Arts I Field Experience
This field experience supports the LTC 4470 component of Phase II. Field experience expectations are delineated in the LTC 4470 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4480: Teaching Middle and Secondary English/Language Arts II
(cross-leveled with LTC 7480). Prepares prospective educators with the knowledge and strategies necessary for integrating and teaching the English/Language Arts, primarily focusing on the teaching of writing and critical thinking.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4480W: Teaching Middle and Secondary English/Language Arts II - Writing Intensive
(cross-leveled with LTC 7480). Prepares prospective educators with the knowledge and strategies necessary for integrating and teaching the English/Language Arts, primarily focusing on the teaching of writing and critical thinking.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4484: Teaching Secondary English/Language Arts II Field Experience
This field experience supports the LTC 4480 component of Phase II. Field experience expectations are delineated in the LTC 4480 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4490: Teaching Middle and Secondary English/Language Arts III
(cross-leveled with LTC 7490). Prepares prospective educators by focusing on the teaching of American culture and critical thinking, through literacy, mediacy, oracy, and cultural artifacts.

Credit Hours: 3
Prerequisites: LTC 4470 or LTC 7470 and LTC 4480 or LTC 7480
Recommended: Admittance to Phase II

LTC 4494: Teaching Secondary English/Language Arts III Field Experience
This field experience supports the LTC 4490 component of Phase II. Field experience expectations are delineated in the LTC 4490 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4500: Emergent Language in Early Childhood
(cross-leveled with LTC 7500). Study of language learning in young children; how meaning of the environment is gained through language; implications for teachers working with children from varying language-learning environments.

Credit Hours: 3

LTC 4510: Assessment in Early Childhood Education
A study of formal and informal assessment instruments and procedures used to measure progress and determine developmentally appropriate curriculum for children in early childhood settings.

Credit Hours: 3
Recommended: H_D_FS 3420 or equivalent child development or child psychology course

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LTC 4530: Introduction to Social Studies
Will introduce prospective teachers to the profession of social studies teaching; to the bases for making curriculum choices in social studies and the process of choosing content; and the process of planning curriculum and instruction in social studies classrooms.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4534: Secondary Social Studies I Field Experience
This field experience supports the Learning, Teaching and Curriculum 4530 component of Phase II. Field experience expectations are delineated in the LTC 4530 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4541: Reading and Writing in the Social Studies
(cross-leveled with LTC 7541). Focuses on the teaching of reading and writing strategies for social studies teachers. Students review literacy

interventions related to reading and writing historical texts. Graded on A-F basis only.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4544: Reading and Writing in the Social Studies Field
This field experience supports the Learning, Teaching and Curriculum 4541 component of Phase II. Field experience expectations are delineated in the LTC 4541 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4550: Assessment in Social Studies
Will address the purposes and development of social studies assessment for all levels from classroom to national assessment. Assessment will be used to reflect upon curriculum/instruction, make revisions and set goals.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4550W: Assessment in Social Studies - Writing Intensive
Will address the purposes and development of social studies assessment for all levels from classroom to national assessment. Assessment will be used to reflect upon curriculum/instruction, make revisions and set goals.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4554: Secondary Social Studies III Field Experience
This field experience supports the LTC 4550 component of Phase II. Field experience expectations are delineated in the LTC 4550 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4560: Reading and Writing in the Content Areas
(cross-leveled with LTC 7560). For secondary school teachers. Specific ways teachers can help students improve reading and writing skills in content areas and ways they can be taught.

Credit Hours: 3
Recommended: Phase II admittance

LTC 4560W: Reading and Writing in the Content Areas - Writing Intensive
(cross-leveled with LTC 7560). For secondary school teachers. Specific ways teachers can help students improve reading and writing skills in content areas and ways they can be taught.

Credit Hours: 3
Recommended: Phase II admittance

LTC 4565: Reading and Writing in the Content Areas II
(cross-leveled with LTC 7565). Reading and Writing in the Content Areas II explores specific reading and writing content area strategies, with a focus on struggling students and new investigations in disciplinary literacy.

Credit Hours: 3
Prerequisites: LTC 4560 or LTC 7560 or LTC 4380

LTC 4571: Introduction to Teaching Mathematics in Middle and Secondary Schools
Introduction to teaching mathematics including: professional mathematics teacher associations and journals, learning theories related to teaching mathematics, tools, and materials for teaching mathematics, curriculum and instructional strategies (middle and lower high school level), and techniques for assessing mathematical understanding. Recommended: Admittance to Phase II

Credit Hours: 3

LTC 4574: Intro. Teaching Math in Middle and Secondary School Field Experience
Field experience supporting the LTC 4571 component of Phase II. Field experience expectations are delineated in the LTC 4571 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4581: Teaching Mathematics in Middle and Secondary Schools: Focus on Algebra and Technology
(cross-leveled with LTC 7581). Key issues in the teaching of pre-algebra through advanced algebra, appropriate use of technology, lesson planning, integration of appropriate models, mathematical connections. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 4571 or LTC 7571 or LTC 4360 or LTC 7360
Recommended: Admittance to Phase II

LTC 4584: Teaching Math in Middle and Secondary Schools: Algebra and Technology Field
This field experience supports the Learning, Teaching and Curriculum 4581/7581 component of Phase II. Field experience expectations are delineated in the LTC 4581/LTC 7581 course syllabi. Graded on S/U basis only.

Credit Hour: 1

LTC 4590: Teach.Math in Sec.Schools: Focus on Geometry, Probability and Statistics
(cross-leveled with LTC 7590). Provides experience which advanced students' knowledge, understanding, and facility in engaging students in learning mathematics. Major issues/topics highlighted in the course are: exploration of curriculum, teaching strategies, and assessment for geometry, probability and statistics.

Credit Hours: 3
Prerequisites: LTC 4571 or LTC 7571 and LTC 4581 or LTC 7581
Recommended: Admittance to Phase II

LTC 4590W: Teach.Math in Sec.Schools: Focus on Geometry, Probability and Statistics - Writing Intensive
(cross-leveled with LTC 7590). Provides experience which advanced students' knowledge, understanding, and facility in engaging students in learning mathematics. Major issues/topics highlighted in the course are: exploration of curriculum, teaching strategies, and assessment for geometry, probability and statistics.

Credit Hours: 3
Prerequisites: LTC 4571 or LTC 7571 and LTC 4581 or LTC 7581
Recommended: Admittance to Phase II

LTC 4594: Teach Math in Sec Sch: Focus on Geometry/Probability
This field experience supports the LTC 4590 component of Phase II. Field experience expectations are delineated in the LTC 4590 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4631: Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I
(cross-leveled with LTC 7631). An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning.

Credit Hours: 4
Prerequisites: Consent required
Recommended: Admittance to Phase II

LTC 4631W: Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr., Assm., & Teach I - Writing Intensive
(cross-leveled with LTC 7631). An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning.

Credit Hours: 4
Prerequisites: Consent required
Recommended: Admittance to Phase II

LTC 4634: Teaching Middle and Secondary Science I Field
This field experience supports the Learning, Teaching and Curriculum 4631 component of Phase II. Field experience expectations are delineated in the LTC 4631 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4641: Teaching Middle and Secondary Science II
An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning.

Credit Hours: 3
Prerequisites: LTC 4631
Recommended: Admittance to Phase II

LTC 4644: Teaching Middle and Secondary Science II Field
This field experience supports the LTC 4641 component of Phase II. Field experience expectations are delineated in the LTC 4641 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4651: Teach.Sci.Second.Sch.:Phil.,Hist.,Sci.Inq.,Curr.,Assm., & Tech III
(cross-leveled with LTC 7651). An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning.

Credit Hours: 3
Prerequisites: LTC 4631 and LTC 4641
Recommended: Admittance to Phase II

LTC 4654: Teach Sci MS/Sec Sch: Phil,Hist,Sci Inq,Curr,Assm & Tech III Fld
This field experience supports the LTC 4651 component of Phase II. Field experience expectations are delineated in the LTC 4651 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4730: Overview of Art Education
(cross-leveled with LTC 7730). This is the first of a three course sequence and serves as the foundation for inquiries of methodological and philosophical approaches to the teaching of the visual arts at the elementary and secondary level.

Credit Hours: 3
Recommended: Admittance to Phase II

LTC 4734: Overview of Art Education Field Experience
This field experience supports the Learning, Teaching and Curriculum 4730 component of Phase II. Field experience expectations are delineated in the LTC 4730 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4740: Inquiry into Art Education: Pre-School Through Middle School
(cross-leveled with LTC 7740). The second of three course sequence. It will cover art education issues as they apply to the Pre-School through Middle School setting.

Credit Hours: 3
Prerequisites: LTC 4730 or LTC 7730
Recommended: Admittance to Phase II

LTC 4740W: Inquiry into Art Education: Pre-School Through Middle School - Writing Intensive
(cross-leveled with LTC 7740). The second of three course sequence. It will cover art education issues as they apply to the Pre-School through Middle School setting.

Credit Hours: 3
Prerequisites: LTC 4730 or LTC 7730
Recommended: Admittance to Phase II

LTC 4744: Inquiry into Art Education: Pre-School Through Middle School Field Experience
This field experience supports the LTC 4740 component of Phase II. Field experience expectations are delineated in the LTC 4740 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4750: Inquiry into Art Education: Secondary
(cross-leveled with LTC 7750). The third of a three course sequence. Student will learn about secondary art education and make application to practice with emphasis on adolescent development, curriculum design, student assessment, instruction, diversity/equity, and professionalism.

Credit Hours: 3
Prerequisites: LTC 4740 or LTC 7740
Recommended: Admittance to Phase II

LTC 4754: Inquiry into Art Education: Secondary Field Experience
This field experience supports the LTC 4750 component of Phase II. Field experience expectations are delineated in the LTC 4750 course syllabi. Graded on a S/U basis only.

Credit Hour: 1
Recommended: Admittance to Phase II

LTC 4800: Educational and Cultural Experience Abroad
(cross-leveled with LTC 7800). Participants engage in experiential learning activities in various types of educational settings abroad that promote intercultural learning and understanding. Components of this education abroad experience include pre-departure preparation sessions, research, in-country observations, cultural immersion, self-reflection, discussions, and documentation. Some sections of this course may include co-teaching at partner schools or volunteering at community-serving organizations. Graded on A-F basis only.

Credit Hour: 0-6

LTC 4800H: Educational and Cultural Experience Abroad - Honors
(cross-leveled with LTC 7800). Participants engage in experiential learning activities in various types of educational settings abroad that promote intercultural learning and understanding. Components of this education abroad experience include pre-departure preparation sessions, research, in-country observations, cultural immersion, self-reflection, discussions, and documentation. Some sections of this course may include co-teaching at partner schools or volunteering at community-serving organizations. Graded on A-F basis only. Prerequisites: Honors eligibility required

Credit Hour: 0-6

LTC 4800W: Educational and Cultural Experience Abroad - Writing Intensive
(cross-leveled with LTC 7800). Participants engage in experiential learning activities in various types of educational settings abroad that

promote intercultural learning and understanding. Components of this education abroad experience include pre-departure preparation sessions, research, in-country observations, cultural immersion, self-reflection, discussions, and documentation. Some sections of this course may include co-teaching at partner schools or volunteering at community-serving organizations. Graded on A-F basis only.

Credit Hour: 0-6

LTC 4960: Special Readings in Curriculum and Instruction
Directed study of literature and research reports in education.

Credit Hour: 1-3

LTC 4970: Standardized Assessments
This non-credit course will provide resources to assist with standardized assessments required to become a Missouri certified teacher. Graded on S/U basis only.

Credit Hours: 0
Recommended: Admittance to Phase III

LTC 4971: Internship and Capstone Seminar
Internship is a full-semester experience in the public schools, including a capstone seminar addressing problems of practice (integrating subjects, reading and writing across the curriculum, meeting all students' needs), and evaluation of the interns preparation for entering the profession. It is offered each Fall and Spring for 10-16 credit hours. Admittance to College of Education required.

Credit Hour: 1-16
Prerequisites: ED_LPA 4060 or ED_LPA 7060
Recommended: Admittance to Phase III

LTC 4971H: Internship and Capstone Seminar - Honors
Internship is a full-semester experience in the public schools, including a capstone seminar addressing problems of practice (integrating subjects, reading and writing across the curriculum, meeting all students' needs), and evaluation of the interns preparation for entering the profession. It is offered each Fall and Spring for 10-16 credit hours. Admittance to College of Education required.

Credit Hour: 1-16
Prerequisites: ED_LPA 4060 or ED_LPA 7060l; Honors eligibility required.
Recommended: Admittance to Phase III

LTC 4981: Internship I
This field experience provides preservice interns a semester-long public school experience where they simultaneously engage in a unique combination of observation and teaching. Through observation, conferencing, reading, discussion, demonstration, and participation, the preservice intern will synthesize the course concepts of the Senior Year On-Site Program (SYOSP). Graded on A-F basis only.

Credit Hour: 1-4
Prerequisites: ED_LPA 4060 or ED_LPA 7060
Recommended: Admittance to Phase III

LTC 7040: Inquiring into Schools, Community and Society I
This course focuses on schooling in American society, the school community, the school culture and students' lives and identities. Studied are the political, cultural, and economic conditions of the schools.

Credit Hour: 2-3
Prerequisites: completion of Phase I or enrollment in a graduate level program in the College of Education

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LTC 7085: Problems in Curriculum and Instruction
Studies professional programs and issues in health or physical education.

Credit Hour: 1-3
Prerequisites: instructor's consent

LTC 7091: Assessment and Family Collaboration in Early Childhood Education
(cross-leveled with LTC 4091). Strategies for effectively observing and assessing young children and strategies for building positive family and community relationships, which support children's development and learning.

Credit Hours: 3
Prerequisites: Consent required (enrollment limited to students admitted to Phase II)

LTC 7110: Working with Infants and Toddlers
(cross-leveled with LTC 4110). Experience working with children aged 6 weeks to 2 1/2 years and their families. Opportunity to apply theories of cognitive, language, and social development.

Credit Hours: 3
Prerequisites: course in child development and admission to Phase II; admittance to College of Education required

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LTC 7120: Early Childhood Education Literacy Methods & Assessment I
(cross-leveled with LTC 4120). Strategies for assessing and supporting young children's literacy development. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Consent of department required

Recommended: Admittance to College of Education required and co enrollment in LTC 4200 and LTC 4210 and K-3 field experience

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LTC 7130: Teaching and Learning Math with Young Children
(cross-leveled with LTC 4130). Strategies for assessing and supporting young children's math learning. Includes strategies for home-school collaboration. Must take concurrently with K-3 field experience. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Consent required (enrollment is limited to students admitted to the College of Education and have completed of ECE Language/Literacy block)

LTC 7131: Teaching and Learning Science with Young Children
(cross-leveled with LTC 4131). Strategies for assessing and supporting young children's science learning. Includes strategies for home-school collaboration. Must take concurrently with LTC 4134. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 4134

LTC 7132: Teaching and Learning Social Studies with Young Children
(cross-leveled with LTC 4132). Strategies for assessing and supporting young children's social studies learning. Includes strategies for home-school collaboration. Must take concurrently with K-3 field experience. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 4134

LTC 7140: Curriculum, Theory and Classroom Management in Early Childhood Education
(cross-leveled with LTC 4140). Reflection on the relationship of theory and practice in ECE. Consideration of various topics including historical influences on early childhood curriculum, models of early childhood curriculum, classroom management, and individualizing curriculum.

Credit Hours: 3
Prerequisites: Consent required (enrollment limited to students who have completed the first two semesters of Phase II)

LTC 7150: Early Childhood Education Literacy Teaching Methods and Assessment II
(cross-leveled with LTC 4150). Advanced strategies for assessing and supporting young children's literacy development.

Credit Hours: 3
Prerequisites: Consent of department required

Recommended: LTC 4120 or LTC 7120, LTC 4124 K-3 Field Experience and admittance to the ECE certification program in Phase II of the College of Education

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LTC 7200: Young Children's Emergent Language
(cross-leveled with LTC 4200). For Early Childhood and Elementary Education majors. Study of young children's language development and implications for teachers.

Credit Hours: 2
Prerequisites: admittance to Phase II; admittance to College of Education required
Corequisites: LTC 4120, LTC 4210, and K-3 field experience

LTC 7220: Emergent Literacy
Emergent reading. Instructional methods, diagnostic procedures, and materials appropriate for learners in elementary grades 1-3.

Credit Hours: 3
Prerequisites: completion of Phase I

LTC 7240: Art for Children
(cross-leveled with LTC 4240). This course focuses on appropriate teaching methods and strategies for teaching art (studio, art history, aesthetic, and criticism), artistic development of children, and curriculum, instructional, and organization strategies for the art classroom.

Credit Hours: 2
Prerequisites: admittance to College of Education

LTC 7340: Middle School Science I
(cross-leveled with LTC 4340). Concepts, materials, methods in middle school science.

Credit Hours: 4
Prerequisites: Consent required. (enrollment limited to Phase I admittance; admittance to the College of Education required)

LTC 7350: Middle School Science II
(cross-leveled with LTC 4350). Concepts, materials, methods in the middle school program.

Credit Hours: 3
Prerequisites: Phase I; admittance to College of Education required

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LTC 7360: Intro. Teaching Mathematics in Middle & Secondary
(cross-leveled with LTC 4360). Introduction to teaching mathematics including: professional mathematics teacher associations and journals, learning theories related to teaching mathematics, tools, and materials for teaching mathematics, curriculum and instructional strategies (middle

and lower high school level), and techniques for assessing mathematical understanding.

Credit Hours: 3
Prerequisites: professional standing, MATH 1360; admittance to College of Education required

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LTC 7400: Teaching Middle and Secondary English/Language Arts III
(cross-leveled with LTC 4400). Prepares prospective educators by focusing on the teaching of American culture and critical thinking, through literacy, mediacy, oracy, and cultural artifacts.

Credit Hours: 3
Prerequisites: LTC 4380 or LTC 7380 and LTC 4390 or LTC 7390; admittance to Phase II of College of Education

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LTC 7410: Teaching, Engaging and Assessing Middle-Level Students
(cross-leveled with LTC 4410). In this course students will learn about the specific and individual needs of middle-level students and develop the skills and understandings to meet these needs.

Credit Hours: 3
Prerequisites: admittance to College of Education required

LTC 7420: Adolescent Literacy
(cross-leveled with LTC 4420). Explores literacy implications of content areas. Topics include determining the difficulty of text, examining literature that supports content, creating alternative assessments, and evaluating reading/writing strategies as tools for learning. (Required of all students obtaining certification in middle school or concurrent certification in middle and secondary school area(s) except language arts.

Credit Hours: 3
Prerequisites: admittance to College of Education required

LTC 7460: Teaching English to Speakers of Other Languages
(same as LINGST 7650; cross-leveled with LTC 4460, LINGST 4650). Linguistics and pedagogical principles of teaching English to speakers of other languages. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: ENGLSH 7600 and ENGLSH 7610 or equivalent and acceptance into Phase II

LTC 7470: Teaching Secondary English/Language Arts I
(cross-leveled with LTC 4470). Prepares prospective educators with the knowledge, skills, and strategies necessary for integrating and teaching the English/ Language Arts, primarily focusing on Young Adult Literature and critical thinking.

Credit Hours: 3
Prerequisites: admittance to Phase II of College of Education

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LTC 7480: Teaching Middle and Secondary English/Language Arts II
(cross-leveled with LTC 4480). Prepares prospective educators with the knowledge, skills, and strategies necessary for integrating and teaching the English/ language Arts, primarily focusing on the teaching of writing and critical thinking.

Credit Hours: 3
Prerequisites: admittance to Phase II of College of Education

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LTC 7490: Teaching Middle and Secondary English/Language Arts III
(cross-leveled with LTC 4490). Prepares prospective educators by focusing on the teaching of American culture and critical thinking, through literacy, mediacy, oracy, and cultural artifacts.

Credit Hours: 3
Prerequisites: LTC 4470 or LTC 7470 and LTC 4480 or LTC 7480; admittance to Phase II of College of Education

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LTC 7500: Emergent Language in Early Childhood
(cross-leveled with LTC 4500). Study of language learning in young children; how meaning of the environment is gained through language; implications for teachers working with children from varying language-learning environments.

Credit Hours: 3

LTC 7560: Reading and Writing in Content Areas
(cross-leveled with LTC 4560). For secondary school teachers. Specific ways teachers can help students improve reading and writing skills in content areas and ways they can be taught.

Credit Hours: 3
Prerequisites: Consent required (enrollment is limited to College of Education admitted to Phase II with 60+ credit hours)

LTC 7565: Reading and Writing in the Content Areas II
(cross-leveled with LTC 4565). Reading and Writing in the Content Areas II explores specific reading and writing content area strategies, with a focus on struggling students and new investigations in disciplinary literacy.

Credit Hours: 3
Prerequisites: LTC 4560 or LTC 7560 or LTC 4380

LTC 7571: Introduction Teaching Mathematics in Middle and Secondary
Introduction to teaching mathematics including: professional mathematics teacher associations and journals, learning theories related to teaching mathematics, tools, and materials for teaching mathematics, curriculum and instructional strategies (middle and lower high school level), and techniques for assessing mathematical understanding.

Credit Hours: 3
Prerequisites: professional standing and MATH 2300

LTC 7581: Teaching Mathematics in Middle and Secondary Schools: Focus on Algebra and Technology
(cross-leveled with LTC 4581). Key issues in the teaching of pre-algebra through advanced algebra, appropriate uses of technology, lesson planning, integration of appropriate models, mathematical connections. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 7571 or LTC 7360

LTC 7587: Seminar in Curriculum and Instruction
Seminar in Curriculum and Instruction.

Credit Hour: 1-3

LTC 7590: Teach.Math in Sec.Schools: Focus on Geometry, Probability & Stat.
(cross-leveled with LTC 4590). Provides experience which advanced students' knowledge, understanding, and facility in engaging students in learning mathematics. Major issues/topics highlighted in the course are: exploration of curriculum, teaching strategies, and assessment for geometry, probability and statistics.

Credit Hours: 3
Prerequisites: LTC 4570 or LTC 7570; admittance to College of Education required

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LTC 7631: Teach.Sci.Second.Sch.:Phil.,Hist., Sci.Inq.,Curr.,Assm., & Tech 3
(cross-leveled with LTC 4631). An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning.

Credit Hours: 4
Prerequisites: Consent required (professional standing; admittance to College of Education required)

LTC 7641: Teaching Middle and Secondary Science II
An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning.

Credit Hours: 3
Prerequisites: professional standing and Teaching Science in the Secondary School, Part I; admittance to College of Education required

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LTC 7730: Overview of Art Education
(cross-leveled with LTC 4730). This is the first of a three course sequence and serves as the foundation for inquiries of methodological and philosophical approaches to the teaching of the visual arts at the elementary and secondary level.

Credit Hours: 3
Prerequisites: admittance to College of Education required

LTC 7740: Inquiry into Art Education: Pre-School Through Middle School
(cross-leveled with LTC 4740). The second of three course sequence. It will cover art education issues as they apply to the Pre-School through Middle School setting.

Credit Hours: 3
Prerequisites: admittance to College of Education required

LTC 7750: Inquiry into Art Education: Secondary
(cross-leveled with LTC 4750). The third of a three course sequence. Student will learn about secondary art education and make application to practice with emphasis on adolescent development, curriculum design, student assessment, instruction, diversity/equity, and professionalism.

Credit Hours: 3
Prerequisites: admittance to College of Education required

LTC 7800: Educational and Cultural Experience Abroad
(cross-leveled with LTC 4800). Participants engage in experiential learning activities in various types of educational settings abroad that promote intercultural learning and understanding. Components of this education abroad experience include pre-departure preparation sessions, research, in-country observations, cultural immersion, self-reflection, discussions, and documentation. Some sections of this course may include co-teaching at partner schools or volunteering at community-serving organizations. Graded on A-F basis only.

Credit Hour: 0-6

LTC 8085: Problems in Curriculum and Instruction
Problems in Curriculum and Instruction.

Credit Hour: 1-99

LTC 8600: Home-School Partnerships: Working with Families
Examination of theoretical and philosophical foundations of parent involvement, social and cultural influences on contemporary families, current research on parent involvement, and characteristics of effective home-school-community partnerships. Graded on A-F basis only.

Credit Hours: 3

LTC 8611: Instructional Leadership and Advocacy in Early Childhood Education
This course supports students in examining the unique leadership context in early childhood education settings and the skills and dispositions required of leaders engaging a diverse, undercompensated workforce with a wide range of formal/degreed education. The course will explore the history of leadership in ECE, historical and contemporary policies that have shaped the field, and future directions for advocacy. Graded on A-F basis only.

Credit Hours: 3

LTC 8612: Play, Inquiry, and Project-based Learning in Classrooms with Young Children
Study of early childhood curriculum in contemporary educational settings along with selection of appropriate materials and development of instructional strategies for children, prekindergarten through early primary grades. Graded on A-F basis only.

Credit Hour: 2-3
Prerequisites: teaching experience or instructor's consent

LTC 8613: Advanced Assessment in Early Childhood
(same as SPC_ED 8490). Procedures and instruments used in assessment of young children, including screening, diagnosis, interpretation of diagnostic findings, and application to instructional plans. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Departmental consent required
Recommended: May be restricted to students in semester-based courses offered through Mizzou Online

LTC 8614: Language and Early Literacy Development
Investigation of the language and early literacy development of young children from birth through age 8. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Department consent required
Recommended: May be restricted to students in semester-based courses offered through Mizzou Online

LTC 8615: The Missouri Writing Project
Focus on 1) current theory and research in teaching writing; 2) development of effective practice in teaching, writing and reading; and 3) experimentation with writing and response.

Credit Hour: 3-4
Prerequisites: successful application to MWP

LTC 8616: The Teaching of Journalism
The course focuses on the learning and teaching of middle, secondary, and post-secondary journalism/mass media course. Major strands of study include the theory and practice of journalism instruction, curriculum, and assessment.

Credit Hours: 3

LTC 8617: Teaching Writing in Middle and Secondary Classroom
This course will encourage the student as a writer and as a teacher of writing, especially in the middle and high school setting. We will explore various types of writing, with emphasis in English Education, including addressing national and state standards.

Credit Hours: 3

LTC 8618: Writing, Reading and Teaching Nonfiction
Students will get more than their feet wet as they read and write a variety of nonfiction texts, explore nonfiction's value and relationship to other genres, and investigate its potential for learning.

Credit Hours: 3

LTC 8619: Media Literacy
Teachers will learn how to incorporate visual images in the classroom while helping students "read" the images of our media-rich culture. Teachers will pair media with literature; analyzed and evaluate different media; and design several assignments.

Credit Hours: 3

LTC 8621: Talk in the Curriculum
This survey of oracy examines talk's essential role in learning and the connections among language, power and cultural identity.

Credit Hours: 3

LTC 8622: Reading, Writing, and Teaching the Graphic Novel
In a world of ever-increasing visual media, graphic novels have become an internationally-popular form of text within a wide range of academic disciplines. This course will explore the theory, research, and practice behind reading and writing sequential art narratives (SANs) and other visual-verbal texts and the pedagogical implications for curriculum and instruction that follow. Students will read a variety of graphic novels (both fiction and nonfiction), craft their own visual-verbal text, and design a related unit plan of instruction for classroom implementation. Graded on A-F basis only.

Credit Hours: 3

LTC 8625: Language Acquisition and Development
You will explore theories of language acquisition and development, and examine how language acquisition impacts reading and writing. Ideas for creating a language rich curriculum, second language learning, and cultural aspects of language will be addressed.

Credit Hours: 3

LTC 8626: Teaching English Language in Middle and Secondary Schools
This course explores theory, research, and practice in the teaching and learning of the English language to students in Grades 6-12, as well as students in introductory college courses. It is one of the core content courses for graduate students enrolled in MU's English Education graduate program. This course applies a sociolinguistic and sociocultural approach to examine topics in the teaching of English including exploration of language ideologies, the teaching of grammar, applications of voice and style, and analysis of language in texts. Graded on A-F basis only.

Credit Hours: 3

LTC 8635: Literature for Children and Youth
Systematic study of selected areas of particular importance to students of literature, teachers, librarians, supervisors, and school administrators.

Credit Hours: 3
Prerequisites: instructor's consent

LTC 8636: Teaching Literature
This course involves exploration of theory, research, and practice in the teaching and learning of literature to students in Grades 9-12. It is intended for master's and doctoral students - experienced teachers enrolled in MU's English Education graduate program. This course addresses selected Common Core Standards, and focuses on an integrated approach to the teaching of literature and some nonfiction. Texts include novels, short stories, poems, literary nonfiction, and plays. The teaching of critical thinking, research skills, and technology are integrated into these experiences. This course promotes the use of various teaching and learning practices. The course is divided into the following major sections: 1) Introductions of Class Members; 2) Theories of Teaching Literature in the Classroom; and 3) Trying Out Theories on Selected Literature. Graded on A-F basis only.

Credit Hours: 3
Recommended: This is a recommended course for early in a master's program

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LTC 8637: Teaching Communication
This course explores the theory, research, and practice in the teaching and learning of communication. This course is intended for master's and doctoral students - experienced teachers enrolled in MU's English Education graduate program. This course addresses selected Common Core Standards, and focuses on the teaching of speaking, listening, and language, as they occur within the best practices of English/Language Arts classrooms. The course involves variety of texts such as short stories, poems, literary nonfiction, and plays. The teaching of critical thinking, research skills, and technology are integrated into these experiences. This course encourages the use of various teaching and learning practices. The course is divided into the following major themes: 1) Introductions of Class Members; 2) Overview of Communication: Theory, Research, Practice; and 3) Teaching Communication in Context: Speaking, Listening, Reading, Writing. Graded on A-F basis only.

Credit Hours: 3
Recommended: We recommended, but do not require, that you take this course early in your program

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LTC 8638: Critical Literacy
This course explores the theory, research, and practice of Critical Literacy. Students develop an understanding of the roots of critical literacy, based in critical theory, and critical pedagogy. Students develop an understanding of how critical literacy fits in conversation with other movements in literacy studies, particularly new literacies, while considering the research and practice rationales for using critical literacy as a way to engage student populations historically underserved by traditional approaches to literacy. Graded on A-F basis only.

Credit Hours: 3

LTC 8640: Studies in English Education
Exploration of the theory, research, and application of topics in the teaching of English, such as Writing/Thinking, Media, Literature, Language, and Creative Nonfiction. Topics announced at time of registration. May repeat to twelve hours with department's approval.

Credit Hours: 3

LTC 8641: Foundations of English Education
This course focuses on foundational readings in the teaching and learning of English/Language Arts. The course requires intensive reading, writing, and discussion focusing on four subcategories of English Education: writing, literature, language and critical thinking. In addition,

the course situates these topics within a historical perspective of the field. An additional focus of this course is on professional networking and development. It is expected that as students develop a greater understanding of the foundations of English Studies in Language Arts, they will see where their areas of expertise and knowledge join them to the profession as a leader. Graded on A-F basis only.

Credit Hours: 3

LTC 8642: Teaching Writing and Reading in Content Areas
Theory and practice of teaching reading and writing. Specific ways teachers can help students use writing to communicate about the course content, as well as to learn course concepts. Class also focuses on how to teach reading in reading classes, how to help students improve reading skills in content areas, and how reading and writing skills can reinforce each other.

Credit Hours: 3

LTC 8643: Teaching ESL/EFL to Adult Learners
This course explores the characteristics of adult learners, theories of adult learning, and the contexts in which adults learn English as a second or foreign language. Students apply this knowledge in the design of language learning curricula and activities for adult learners. Graded on A-F basis only.

Credit Hours: 3

LTC 8644: Teaching English Grammar and Pronunciation
This course develops teachers' knowledge of the structure of the English language (its grammar and its sound system) and provides them with pedagogical skills in teaching grammar and pronunciation to second/ foreign language learners. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 8645 and LTC 8648

LTC 8645: Second Language Acquisition
This course examines theories of how humans develop first and second languages in childhood and adulthood and how this knowledge can be used to educate language learners. Graded on A-F basis only.

Credit Hours: 3

LTC 8646: Materials for and Assessment of English Language Learners
This course will examine the appropriate classroom materials, methods, reasons, and tools for the formal and informal assessment of English Language Learners. Graded on A-F basis only.

Credit Hours: 3

LTC 8647: Language and Culture for Educators
This course will examine how to prepare educators to effectively educate students from a range of linguistic and cultural backgrounds by developing a broad understanding of the definition and nature of culture and appropriate teaching strategies and materials for diverse students. Graded on A-F basis only.

Credit Hours: 3

LTC 8648: Linguistics for Educators
This course focuses on the form, meaning, and use of language in context and applying knowledge of linguistics to the teaching of English language learners. Graded on A-F basis only.

Credit Hours: 3

LTC 8649: Methods of Teaching English Language Learners
This course will examine how to prepare teachers to develop the investigative, decision-making, and reflective teaching skills needed to work with English Language Learners. Graded on A-F basis only.

Credit Hours: 3

LTC 8650: English to Speakers of Other Languages Practicum
This culminating course will allow students to apply the theory and practice of teaching English to non-native speakers in an educational setting. Graded on A-F basis only.

Credit Hours: 3

LTC 8653: Education Toward Bi/Multilingualism
This course will address the theory and praxis of bilingual education in the U.S. and international contexts. This course will examine different models of bilingual education as well as cultural, social, and political perspectives on language minority education. Emphasis is placed on pedagogical implications of teaching bilingual students with particular attention paid to first language development and second language teaching for linguistically and culturally diverse students. Graded on A-F basis only.

Credit Hours: 3

LTC 8654: ESOL Curriculum Development
This course prepares teachers to design a language learning curriculum for students who are learning English as a second or foreign language.

Credit Hours: 3

LTC 8660: Reading Miscue Analysis
The process in which readers construct meaning by relating their socio-psycholinguistic backgrounds to discourse. 15 studied miscues (text deviations) are analyzed at several linguistic levels. A comprehension centered reading program is developed.

Credit Hours: 3
Prerequisites: LTC 7540 and LTC 7560, or equivalent

LTC 8664: Practicum in Child Study I
Practicum experiences in diagnosing educational problems of school children.

Credit Hour: 3-5
Prerequisites: LTC 7540 or LTC 7560 or LTC 8670

LTC 8665: Practicum in Child Study II
Practicum experiences in applying remedial procedures to children with educational problems.

Credit Hour: 3-5
Prerequisites: LTC 8664

LTC 8670: Analysis & Correction of Reading Disabilities
Diagnostic and corrective procedures in reading instruction that may be used for clinical study.

Credit Hours: 3
Prerequisites: LTC 7540 or instructor's consent

LTC 8671: Bridging Literacy Research and Practice: Designing Responsive Reading and Writing Instruction
This course spans topics on K-12 reading and writing in US education systems, which continues to be characterized by rising inequities. Core to this course, and to our future humanity, is the need for learning opportunities for all students. In this course and program, we recognize literacy as a fundamental right and a cornerstone of meaningful learning for all students. We are committed to ensuring that literacy instruction is not only effective but also responsive to all strengths, experiences, and needs of every learner. By centering literacy as essential rather than supplementary, we equip educators with the knowledge and strategies to create inclusive, accessible, and empowering learning environments where all students can thrive as readers, writers, and critical thinkers. Graded on A-F basis only.

Credit Hours: 3
Recommended: LTC 8675, LTC 8625. Students seeking DESE Special Reading Certificate, Graduate Certificate in Literacy Instruction and Intervention

LTC 8672: Contemporary Perspectives on the Teaching of Reading
In this class we will explore prominent contemporary perspectives on literacy development and instruction. The course explores three primary perspectives: The Science of Reading, Digital Literacies, Culturally Sustaining Pedagogies. We will examine scholarship on each of these perspectives to promote an understanding of ways researchers and educators conceptualize them and their relevance for teaching and learning. Graded on A-F basis only.

Credit Hours: 3

LTC 8675: Foundations of Reading Instruction
This online course examines principles and practices of teaching reading to PK-12 students; the nature of reading and literacy learning, the foundations of reading acquisition and development; and reading instructional across grade levels. Graded on A-F basis only.

Credit Hours: 3

LTC 8681: Guiding all Readers Toward Independence
This course is an exploration of ways to help all readers, particularly those who have been unable to achieve success in reading. Focus areas are assessment, evaluation, and planning, all examined through work with an individual reader in a targeted case study. Graded on A-F basis only.

Credit Hours: 3

LTC 8682: Focus on Writing in the Classroom
The course focuses on theory, research and practices in teaching writing in the elementary classroom (K-6) while developing a critical understanding of process methods to teach writing.

Credit Hours: 3

LTC 8683: Celebrating Reading Through Good Books
Many people can read but do not. This course will explore ways to make reading a joyful, exciting experience. Assignments will include reading journal articles that will help students meet self determined goals. Sharing books will be an important part of this course.

Credit Hours: 3

LTC 8684: Integrating Literacy and Technology
This will be a seminar course in which the students explore definitions of literacy, theoretical frameworks of educational technology, and literature that investigates the effectiveness of integrating literacy and technology. The students will also examine and evaluate a range of software used to integrate literacy and technology.

Credit Hours: 3

LTC 8685: Literature Opportunities: Using Children's and Young Adult's Literature in the Classroom
This class examines genres in children's and young adult literature (grades 1-9). In-depth look at the work of children's authors and illustrators; explore issues of censorship, gender, and culture.

Credit Hours: 3

LTC 8686: Theory of Instructional Strategies
The course investigates instructional strategies in K-12 and higher education classrooms and the theories behind those strategies. Content includes large and small group strategies, inquiry-based learning, student-centered and direct instruction, and differentiated instruction.

Credit Hours: 3

LTC 8687: Literacy and the Internet (Grades K-12)
The internet offers a myriad of opportunities to engage K-12 students in meaningful, purpose-driven reading and writing. Students examine their own literacy programs, examine ways they can incorporate the internet, and create a classroom web site.

Credit Hours: 3

LTC 8688: Nature of Literacy in a Digital World
New literacies are required to successfully engage in professional, civic, and personal lives that are imbued with technology. Students examine the literacy skills required to proficiently read and write with text messages, blogs, wikis, social networks, and virtual worlds.

Credit Hours: 3

LTC 8689: Curricular Decisions for Literacy in a Digital World (Grades K-12)
This course will focus on making a match between educational technologies that can be used to support literacy and your beliefs about literacy instruction. We will examine types of educational technologies, stances towards the integration of literacy and technology, various theoretical perspectives of literacy acquisition and development, aspects of literacy, and instructional approaches for literacy. You will examine various technologies and identify what best matches your literacy instruction. Graded on A-F basis only.

Credit Hours: 3

LTC 8710: Nature of Science and Science Teaching
Examines philosophical, historical and sociological views of the nature of science and implications for science education policy and science instruction.

Credit Hours: 3

LTC 8712: Inquiry and the Science Curriculum
Examines inquiry as the foundation of the science curriculum. Includes study of exemplary programs and curriculum materials, and provides models for curriculum development in science education.

Credit Hours: 3

LTC 8714: Research in Science Education
Studies appropriate research methodologies and reviews research and selected readings in science education. Allows option for elementary or secondary emphasis for specific areas: life, physical or earth sciences.

Credit Hours: 3
Prerequisites: undergraduate course in Science Education

LTC 8717: Teaching, Learning, & Research in Middle & Secondary School Sci.I
Course I is for Post-Baccalaureate Majors seeking Middle and/or Secondary teacher certification. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 8942

LTC 8718: Teaching, Learning & Research Middle & Secondary School Sci.: II
For Post-Baccalaureate Majors seeking Middle and/or Secondary teacher certification. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 8942

LTC 8719: Teaching, Learning, & Research Middle & Secondary
For Post-Baccalaureate Majors seeking Middle and/or Secondary teacher certification. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 8942

LTC 8721: Teaching Engineering in Middle and High School Classrooms
This course equips students with the necessary knowledge, skills, and dispositions to be an effective teacher of engineering education in the 6-12 classroom. This course is designed to immerse students in learning experiences that will provide a robust understanding of engineering teaching and learning from the perspective of both learner and teacher. It is organized around problems of practice, with an emphasis on

engineering content and practice aligned with engineering literacy aligned with the American Society for Engineering Education (ASEE). Graded on A-F basis only.

Credit Hours: 3

LTC 8723: The Practices of Science Education
An integration of the philosophy and history of science, technology, society; teaching science as inquiry; classroom management, strategies and curricula for teaching/learning science; and using technology in science learning. Graded on A-F basis only.

Credit Hours: 3

LTC 8724: College Science Teaching
(same as BIO_SC 8724, PHYSCS 8310, ASTRON 8310). Study of learner characteristics, teaching strategies, and research findings related to teaching science at the post-secondary level.

Credit Hours: 3

LTC 8725: Science Outreach: Public Understanding of Science
(same as PHYSCS 8350, AN_SCI 8725). Development of presentations to adult audiences on the science underlying issues of current interest. May be repeated for credit.

Credit Hour: 1-2

LTC 8726: Integrating Science with Outreach
This course provides an opportunity for students to earn credit for outreach activities in the community. Students will capitalize on their area of study and scientific expertise in developing, implementing, and evaluating related outreach activities. May be repeated for credit.

Credit Hour: 1-6

LTC 8730: Survey of Art Education
Provides survey of the development of art education and problems in the field by means of a critical inquiry.

Credit Hours: 3

LTC 8735: Visual Literacy and Visual Culture
This course will investigate the intersection between art and language, exploring the connections between visual media and the written word- how these two areas inform and enrich each other.

Credit Hours: 3

LTC 8740: Curriculum in Art Education
Advanced study of art education curricula, with option for elementary or secondary emphasis. Study of exemplary art programs, standards of quality, curriculum models, curriculum design and construction, concomitant instructional methods and evaluation.

Credit Hours: 3

LTC 8745: Visual Thinking Strategies I
This course will introduce regular classroom and art educators to Visual Thinking Strategies theory and methodology, building practical VTS facilitation skills through structured guidance and feedback as each participant implements VTS lessons within his/her own teaching context.

Credit Hours: 3

LTC 8746: Visual Thinking Strategies II
Visual Thinking Strategies II students will build upon the basic facilitation skills acquired during VTS I as they design an image-based studio curriculum tailored to their own students and classrooms. Action research and peer coaching are key features of the course. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 8745

LTC 8750: Review of Research in Art Education
Studies appropriate research methodologies and reviews research and selected readings in art education.

Credit Hours: 3

LTC 8755: Introduction to Therapeutic Arts for Artists and Art Educators
This course will provide an introduction to the concepts of art therapy and how these concepts can be implemented in contemporary art educational settings. Course topics will include: an overview of the field of art therapy, the overlap of art therapy principles and art education practice, visual culture, and experiential art making. The course will delve into ways which art can be used to work with multicultural populations, those experiencing grief, loss, or serious illness, as well as the impact of trauma on learning. Graded on A-F basis only.

Credit Hours: 3

LTC 8765: Artistic Thinking: Multimedia Applications for Teaching Art
This course is designed to keep pace with contemporary trends in technology and digital media literacies. Students will deeply explore

current applications and develop curriculum implementation strategies for K-12 instruction in visual arts classrooms.

Credit Hours: 3

LTC 8766: Illuminating Process and Product: Making Learning Visible
This course focuses on the evaluative processes that surround and are embedded in art education. Due to the subtle, nuanced, and product based nature of visual arts, evaluative practices should be studied, understood, and implemented in an effective and encouraging manner. Graded on A-F basis only.

Credit Hours: 3

LTC 8767: The Art of Teacher Reflection
This course investigates reflective practices making deep inquiries into theoretical teaching practices. Students will examine their educational heritage, cultural beliefs and the implications these beliefs have on their current and future classrooms. Graded on A-F basis only.

Credit Hours: 3

LTC 8780: Managing Classrooms for Learning
Theoretical assumptions, goals, and research that inform various approaches to classroom management advocated for practitioners. Includes strategies for conducting action research on classroom management.

Credit Hour: 1-3
Prerequisites: An educational psychology course or instructor's consent

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LTC 8790: Patterns for Instruction in Social Studies
Presents and evaluates strategies for planning, teaching, and evaluating social studies in elementary and secondary schools.

Credit Hours: 3

LTC 8800: Secondary Social Studies Curriculum
Examines current theory, trends and practices in secondary social studies curriculum with a practicum in curriculum development.

Credit Hours: 3

LTC 8805: Inquiry into K-12 History and Social Science
this course is designed as a directed study on a topic in social studies content for the K-12 classroom. The focus of the course is on what is taught in social studies. Graded on A-F basis only

Credit Hours: 3

LTC 8806: Issues in the Social Studies Classroom
This course is designed to provide an intensive study of current trends and significant issues in social studies that affect the social studies classroom.

Credit Hours: 3

LTC 8807: Exploration of Research in Social Studies
The course serves as the capstone experience for graduate students pursuing in the LTC Masters program with an emphasis in social studies education. This course prepares students to engage in classroom research specific to a social studies classroom and/or setting. Students will consider their role as classroom researchers. Students will be asked to synthesize course readings and discuss the underlining theories, dilemmas, and tensions found in the research. Students will also conduct a capstone project. Graded on A-F basis only.

Credit Hours: 3

LTC 8860: Mathematics Curriculum
Evolution of the mathematics curriculum during the 20th century will be studied. Emphasis will be given to examining major factors influencing the changing mathematics curriculum and their impact.

Credit Hours: 3
Prerequisites: teaching experience or the instructor's consent

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LTC 8861: Teaching, Learning & Research in Middle & Secondary School Math I
Course I for Post-Baccalaureate Majors seeking Middle and/or Secondary teacher certification. Graded on A-F basis only.

Credit Hours: 3

LTC 8862: Teaching, Learning & Research Middle & Secondary School Math: II
Course II for Post-Baccalaureate Majors seeking Middle and/or Secondary teacher certification. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: LTC 8861
Corequisites: LTC 8942

LTC 8863: Teaching, Learning, and Research Middle and Secondary Math III
Course III for Post-Baccalaureate Majors seeking Middle and/or Secondary teacher certification. Graded on A-F basis only. Prerequisites: LTC 8861, and LTC 8862; Co-Requisites: LTC 8942.

Credit Hours: 3

LTC 8865: Assessment in Mathematics Education
Examination of assessment practices and the accountability movement. Emphasis is placed on significant research findings in assessment and implications for planning, implementing, and evaluating mathematics instruction.

Credit Hours: 3
Prerequisites: ESC_PS 7100 and teaching experience

LTC 8866: Contemporary Curriculum Issues in Mathematics Education
Mathematics curriculum is a concern to students, parents, school districts, business leaders, and government officials. This course examines current trends in mathematics curriculum from the perspective of mathematics educators, policymakers, and the public. Factors influencing changes in mathematics curriculum are examined. Graded on an A-F basis only.

Credit Hours: 3

LTC 8870: Studying Mathematics Teaching in Schools
This course explores issues that must be considered in the study of mathematics teaching, with a focus on appreciating the complexity of teaching mathematics and the challenges involved with improving teaching within typical school systems and structures. It includes a survey of research on mathematics teaching and an introduction to a variety of research methodologies used in such studies. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Open to masters and doctoral students

LTC 8871: Teaching and Learning Number/Operations Advanced
Course will develop understanding of learning and teaching pre-number concepts, counting and cardinality, numbers and operations in base ten. Emphasis will be given to how children think about and learn these concepts and how they fit into the elementary school curriculum. Graded on A-F basis only.

Credit Hours: 3
Corequisites: LTC 8881

LTC 8872: Teaching and Learning Rational Number Advanced
The course is designed to develop an understanding of the learning and teaching of rational numbers and the ratio and proportional relationships. Emphasis will be given to how children think about and learn these concepts and how they fit into the elementary school curriculum. Graded on A-F basis only. Corequisites: LTC 8882

Credit Hours: 3

LTC 8873: Teaching and Learning Geometry and Measurement Advanced
This course is designed to develop and understanding of the teaching and learning of geometry and measurement. Emphasis will be given to how children think about and learn these concepts and how they fit into an elementary mathematics curriculum. Graded on an A-F basis only.

Credit Hours: 3
Corequisites: LTC 8883

LTC 8874: Teaching and Learning Algebraic Reasoning Advanced
Course focuses on the content and complexities of teaching and assessing algebraic reasoning in grades 1-6. Includes examinations of representation, analysis of mathematical structures, patterns, functions, and the transition from arithmetic to algebra. Graded on A-F basis only. Corequisites: LTC 8884

Credit Hours: 3

LTC 8875: Technology and Mathematics Education
This course will focus on effective uses of technology in mathematics teaching and learning. Participants will experience different electronic technologies including computers, graphing calculators, and calculator based laboratories.

Credit Hours: 3
Prerequisites: Open to masters and doctoral students

LTC 8876: Teaching Data Analysis and Mathematical Modeling
The course will develop understanding of data analysis and mathematical modeling. Emphasis will be given to how children think and learn about these concepts and how they fit into the elementary school curriculum. Graded on A-F basis only.

Credit Hours: 3

LTC 8877: Foundations of Mathematics Leadership in Elem Schools
This course provides opportunities for participants to develop knowledge and understanding of leadership principles and the process of continuous improvement as it related to the roles and responsibilities of elementary mathematics specialists. Graded on A-F basis only.

Credit Hours: 2

LTC 8878: Mathematical Leadership for Elementary Schools Advanced
This advanced leadership course focuses on research and practice related to teamwork, interaction, communication, conflict resolution, and

leadership in K-5 schools. Candidates will examine effective strategies for influencing and facilitating school/district improvement. Course graded on A-F basis only.

Credit Hours: 3

LTC 8879: Mathematical Thinking and Learning
This course surveys empirical research on mathematical thinking and learning in grades K-12, explores the complexity and mathematical power in students' thinking, and cultivates skill in using clinical interview methods to study students' thinking and learning. Graded on A-F basis only.

Credit Hours: 3

LTC 8881: Internship - Number and Operations in Elementary Schools
A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (parents and teachers) on number and operations concepts. Graded on A-F basis only. Corequisites: LTC 8871

Credit Hour: 1

LTC 8882: Internship - Rational Numbers in Elementary Schools
A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (teachers and parents) on rational number and proportional thinking concepts. Graded A-F basis only. Corequisites: LTC 8872

Credit Hour: 1

LTC 8883: Internship - Geometry/Measurement in Elementary Schools
A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with students and adult learners (teachers and parents) on geometry and measurement concepts appropriate for K-5 students. Graded on A-F basis only.

Credit Hour: 1
Corequisites: LTC 8873

LTC 8884: Internship - Algebraic Reasoning in Elementary Schools
A supervised mathematics teaching practicum with online seminars in which the candidate acquires experience working with a range of students and adult learners (teachers and parents) on concepts related to algebraic reasoning appropriate for K-5 students. Course graded on A-F basis only. Corequisites: LTC 8874

Credit Hour: 1

LTC 8886: Contemporary Equity Issues in Mathematics Education
Certain student populations (e.g., socioeconomically disadvantaged, racial minorities, English Language Learners, students with disabilities) have been traditionally underserved by the U.S. mathematics education system. This course explores the fundamental issues underlying this situation and explores mathematics teaching techniques that can be used to make students' learning opportunities more equitable. Graded on an A-F basis only.

Credit Hours: 3

LTC 8890: Mathematics Education Research
Examination of major research efforts and significant findings on learning and teaching mathematics. Emphasis will be placed on becoming knowledgeable of research and on developing wise consumers of research in mathematics education.

Credit Hours: 3
Prerequisites: teaching experience or instructor's consent

LTC 8893: Integrating Instruction in Science and Mathematics, Grades 5-12
This course is designed to help middle and secondary mathematics and science teachers enhance student understanding of mathematics and science through integration of the disciplines.

Credit Hours: 2

LTC 8896: Secondary Mathematics from an Advanced Perspective
This course deepens understanding of the mathematics underlying the secondary school curriculum. It addresses high school content from the viewpoint of advanced mathematics. Connections are explored within high school content and between high school and college content. Content strands include analysis, algebra, and Euclidean and non-Euclidean geometry. Graded on an A-F basis only.

Credit Hours: 3

LTC 8900: Seminar in Curriculum and Instruction
Seminar in Curriculum and Instruction. Some sections may be graded on A-F or S/U graded basis only.

Credit Hour: 1-3

LTC 8910: Individual Research
Independent research not leading to thesis.

Credit Hour: 1-3

Prerequisites: consent required

LTC 8913: Curriculum Development
Curriculum Development explores the intersections of learning, teaching, and curriculum. Students investigate not just various definitions of, types of, and purposes for educational curriculum, but more specifically focus on curriculum-in-practice. Student explore how teachers enact curriculum and the factors that inform curriculum use, such as state and national standards, standardized assessments, school contexts and curricular materials. Students study and apply models of curriculum development and curriculum decision-making for everyday classroom use, which may include backwards design, culturally-relevant designs, principles of learning and/or other curricular and instructional approaches. Graded on A-F basis only.

Credit Hours: 3

LTC 8914: Culturally Responsive Pedagogy
This course equips practicing teachers, curriculum developers, and community leaders with tools to address the varied cultural and social landscape of today's classrooms. Students examine political, cultural, and economic conditions of schools and develop strengths-based, culturally responsive approaches to teaching. Graded on A-F basis only.

Credit Hours: 3

LTC 8915: Classroom Research-Learning, Teaching and Curriculum
Study of original classroom research and theories of instruction leading to plans for personal research and theory development.

Credit Hour: 1-3
Prerequisites: advanced graduate standing

LTC 8930: Ethnographic Research in Education
Investigate practical aspects, nature, and assumptions of ethnographic research in education. Pilot study required.

Credit Hours: 3
Prerequisites: ESC_PS 7170 or equivalent

LTC 8940: In-Service Course in Curriculum and Instruction
Course work adapted to current vocational needs.

Credit Hour: 1-99
Prerequisites: instructor's consent

LTC 8941: Internship in Curriculum and Instruction
Provides internship experience under supervision in advanced levels of curriculum and instruction.

Credit Hour: 1-99
Prerequisites: departmental chairman's consent

LTC 8942: Advanced Internship in Curriculum and Instruction
This internship is for students enrolled in MU COE Post-Baccalaureate Certification Programs. Graded on A-F basis only.

Credit Hour: 1-10
Prerequisites: instructor's consent

LTC 8950: Case Study Research Methods
This course introduces graduate students to the advanced qualitative techniques related to case study research, within and across case coding strategies, and theoretical/philosophical underpinnings of case study research methodology.

Credit Hours: 3
Prerequisites: Previous introductory course in qualitative research methods is required

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LTC 8951: Grounded Theory and Situated Inquiry
(same as ED_LPA 8951). For qualitative researchers attempting to understand social processes, Grounded Theory (GT) offers a way of developing theory empirically, 'from the bottom up.' In fact, this is what most distinguishes GT from other methods. It is explicitly emergent. It does not test a hypothesis. It provides useful tools to learn about participants' understandings and experiences of a social issue, process, or phenomena and to discover and construct theory to account for the social processes being studied. In this course, we will consider the theoretical underpinnings and practices of classic and contemporary GT methodologies. Importantly, we will conduct research and a GT analysis of data.

Credit Hours: 3
Prerequisites: ESC_PS 8957 and ESC_PS 9620

LTC 8952: Narrative Inquiry Theory and Research Methods
Narrative inquiry has gained popularity amongst researchers specifically in education and other social science fields with various theoretical and analytical approaches. In this advanced qualitative course, students will learn about these approaches and develop critical perspectives toward narrative inquiry. The purpose of this course is to expose students, in various disciplines, to the theoretical underpinnings of narrative inquiry and provide space to "have a try" at several analytical methods for narrative research (i.e. thematic, structural, dialogic/performative, and image analysis). This course will equip students with narrative research method experiences that could be used for dissertation research.

Credit Hours: 3
Prerequisites: ESC_PS 8957 and ESC_PS 9620

LTC 8953: Poststructural Theory and Research Methods
Poststructural perspectives call into question the universals and/or structures of society. The purpose of this course is to expose students, in various disciplines, to poststructural theory and provide space to "have a try" at thinking with theory for data analysis. This course provides space for students to read poststructural scholars' original writings. Readings for the course also allow students to read secondary sources and research studies that apply poststructural ideas. Students are encouraged to think of ways that poststructural theory can become a methodology and/or method for research in their discipline.

Credit Hours: 3
Prerequisites: ESC_PS 8957 and ESC_PS 9620

LTC 8957: Qualitative Methods in Educational Research I
(same as ESC_PS 8957, ED_LPA 8957). This course provides a practical introduction to qualitative research and its applications in education and social sciences. Graded on A-F basis only.

Credit Hours: 3

LTC 8960: Arts-Based Research
This course consists of both the historical and current landscape of arts-based research and its place in/against the field of qualitative research. Further, it engages students in readings that span the breadth of arts-based research practices, while cultivating opportunities for students to become arts-based research practitioners. Graded on A-F basis only.

Credit Hours: 3

LTC 9050: Curriculum Theories
Examines key ideological orientations in curriculum theory, explores the notion of curriculum as more than "a course of study" or "structured knowledge," and asserts that curriculum is embedded within historical discourses and practices of race, class, gender and sexuality. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Admittance into a doctoral program

LTC 9060: Theories of Learning and Implications for Education
The course will familiarize students with the learning theories most widely drawn upon in educational research. Students will examine how theories are used and the range of interpretations of these theories. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Admittance into a doctoral program

LTC 9070: Philosophical Perspectives in Education Research
An examination of the history and philosophy of social science research, including perspectives on ontology, epistemology, and axiology. Students will consider how various philosophical assumptions shape research paradigms, purposes, interests, and methodologies. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Admittance into a doctoral program

LTC 9080: Teacher Education Research
This course is designed to prepare doctoral students as researchers who understand current trends and challenges for teacher education across the professional continuum, and who have the ability to formulate, compare, and problematize relevant research in the field.

Credit Hours: 3
Prerequisites: Admittance into a doctoral program

LTC 9090: Research in Curriculum and Instruction
Graded on a S/U basis only.

Credit Hour: 1-99

LTC 9470: Teaching Computer Science in Middle and High School Classrooms
This course equips students with the necessary knowledge, skills, and dispositions to be an effective teacher of computer science in the 6-12 classroom. This course is designed to immerse students in learning experiences that will provide a robust understanding of computer science teaching and learning from the perspective of both learner and teacher. It is organized around problems of practice, with an emphasis on the five standards from the CSTA/ISTE Standards for Teachers: Computer knowledge and skills, equity and inclusion, professional growth and identity, instructional design, and classroom practice. Graded on A-F basis only.

Credit Hours: 3

LTC 9620: Qualitative Methods in Educational Research II
(same as ED_LPA 9620, ESC_PS 9620). This course constructs a conceptual and methodological bridge between the understandings of qualitative research developed in Qualitative Methods I and more advanced study of theories, designs, and methods. The focus is on theory, approaches to data analysis, and interpretation. Graded on A-F basis only.

Credit Hours: 3

LTC 9675: Language, Literacy, and Culture
This course explores how culture mediates language and literacy learning from a variety of theoretical perspectives. It examines language and literacy practices in and out of school and the ways educational polices and institutions shape what practices are valued and sustained over time. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Doctoral students only

LTC 9750: Doctoral Research Seminar in Art Education
This course focuses on art education research and is designed to offer doctoral students an opportunity to investigate, through readings, reflective thinking, writing, and discussion, the issues that impact art education research. Graded on A-F basis only.

Credit Hour: 1

LTC 9850: Equity and Diversity in Mathematics Education
In this course we examine studies of equity and diversity in mathematics education. In particular, we explore the underlying theory of such studies and the counter-narratives of common assumptions in the teaching and learning of mathematics. Graded on A-F basis only.

Credit Hours: 3

LTC 9860: Research in Mathematics Education
This course focuses on research connoisseurship and expertise, and provides concrete opportunities for students to present, critique, and discuss research. It is intentionally designed as a practical research-learning environment. Graded on S/U basis only.

Credit Hour: 1
Prerequisites or Corequisites: Doctoral candidate status in Learning, Teaching, & Curriculum

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