

Learning, Teaching and Curriculum

Professionals interested in advancing their careers in education can specialize in a variety of disciplines in MU's Department of Learning, Teaching and Curriculum. LTC specializes in teacher preparation and in graduate programming for professionals in education. Students find challenging, yet rewarding, opportunities through MU's dynamic research centers and projects and are supported by faculty who are subject matter experts.

Consider LTC if you:

- want to advance as a professional in education through a field specialization
- enjoy exercising independent judgment, and
- desire to help all learners achieve success and strengthen the future through education.

Contact us:

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303 Townsend Hall
Columbia, MO 65211
phone: 573-882-2965
website: <https://education.missouri.edu/learning-teaching-curriculum/>

Faculty

Professor E. Baker**, S. Empson**, P. J. Friedrichsen**, J. Lannin**

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Associate Teaching Professor N. Ashcraft*, L. Ray*

Assistant Teaching Professor R. Metro

Postdoctoral Fellow M. Olgun Baytas

Interim Department Chair S. Otten**

Richard G. Miller Professor S. Empson**

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Curators' Professor B. Reys* (Emerita), R. E. Reys** (Emeritus)

Research Professor Emeritus D. A. Grouws*

Professor Emeritus L. H. Barrow*, R. F. Fox**, N. Knipping*, S. Palonsky**, R. Robinson*

Associate Professor Emeritus M. Volkmann*, C. Gilles**, K. Unrath**

* Graduate Faculty Member - membership is required to teach graduate-level courses, chair master's thesis committees, and serve on doctoral examination and dissertation committees.

** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

While MU does not offer undergraduate degrees specifically in Learning, Teaching & Curriculum, the University does offer baccalaureate opportunities in a number of related areas, both within the College of Education and Human Development, and in the other Schools

and Colleges that comprise the University. The catalog provides a complete list of these degree options (<http://catalog.missouri.edu/degreesanddegreeprograms/>).

Graduate

- MEd in Learning, Teaching and Curriculum (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum/>)
 - with emphasis in Art Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-art-education/>)
 - with emphasis in Art Education, Certification (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-art-education-certification/>)
 - with emphasis in Early Childhood Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-early-childhood-education/>)
 - with emphasis in Early Childhood Education, Certification (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-early-childhood-education-certification/>)
 - with emphasis in Elementary Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-elementary-education/>)
 - with emphasis in English Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-english-education/>)
 - with emphasis in Literacy Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-literacy-education/>)
 - with emphasis in Mathematics Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-mathematics-education/>)
 - with emphasis in Mathematics Education, Certification (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-mathematics-education-certification/>)
 - with emphasis in Science Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-science-education/>)
 - with emphasis in Science Education, Certification (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-science-education-certification/>)
 - with emphasis in Social Studies Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-social-studies-education/>)
 - with emphasis in Teaching English to Speakers of Other Languages (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/med-learning-teaching-curriculum-emphasis-teaching-english-speakers-other-languages/>)

- EdSp in Learning, Teaching and Curriculum (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edsp-learning-teaching-curriculum/>)
 - with emphasis in Literacy Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edsp-learning-teaching-curriculum-emphasis-literacy-education/>)
 - with emphasis in Mathematics Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edsp-learning-teaching-curriculum-emphasis-mathematics-education/>)
 - with emphasis in Science Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edsp-learning-teaching-curriculum-emphasis-science-education/>)
- EdD in Learning, Teaching and Curriculum (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edd-learning-teaching-curriculum/>)
 - with emphasis in Elementary Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edd-learning-teaching-curriculum-emphasis-elementary-education/>)
 - with emphasis in General (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/edd-learning-teaching-curriculum-emphasis-general/>)
- PhD in Learning, Teaching and Curriculum (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum/>)
 - with emphasis in Art Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-art-education/>)
 - with emphasis in Early Childhood Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-early-childhood-education/>)
 - with emphasis in Elementary Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-elementary-education/>)
 - with emphasis in Language and Literacies for Social Transformation (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-language-literacies-social-transformation/>)
 - with emphasis in Mathematics Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-mathematics-education/>)
 - with emphasis in Reading Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-reading-education/>)
 - with emphasis in Science Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-science-education/>)
 - with emphasis in Social Studies Education (<http://catalog.missouri.edu/collegeofeducation/learningteachingcurriculum/phd-learning-teaching-curriculum-emphasis-social-studies-education/>)

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About the Program

Graduate study in Learning, Teaching, & Curriculum prepares teachers, curriculum leaders and teacher educators for professional excellence. With the rapid changes in education--especially developments in instructional materials and techniques, curriculum construction and classroom organization--teachers who have completed their certification may need to update, refine and extend their knowledge and skills.

Further, many educators enter new roles as subject-matter specialists, curriculum coordinators, supervisors of instruction, department heads, leaders of professional development education or teacher educators. Graduate programs in Learning, Teaching, & Curriculum are designed to prepare the professionals for these new roles.

Areas of Study

Depending on the degree program, students can pursue discipline-specific emphasis areas (e.g., English education, mathematics education, science education and others) and focus on curriculum development, research, or teacher education.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program website or ask the program contact for details.

LTC_V 1050: Principles of Sales

Provide the student with the concepts, tools and skills to become a professional salesperson. Emphasis is placed upon participation and performance of sales skills.

Credit Hours: 3

LTC_V 1070: Word Processing and Presentation Concepts

Instruction on preparing written documents and creating presentations for business, legal, medical, and social service career areas using word processing and presentation software; Special emphasis on the use of advanced features of computer business application software. Graded on A-F basis only.

Credit Hours: 3

LTC_V 1110: Principles of Retailing

Examines problems, opportunities and trends in retailing. Problems and cases deal with store organization, budgeting, control, personnel and operation.

Credit Hours: 3

LTC_V 4085: Problems in Curriculum and Instruction - CTE

Study of professional programs and issues or technical problems related to the field of career and technical education.

Credit Hour: 1-99

LTC_V 4210: Foundations of Adult Workforce Education

Study of workforce education and human resource development; emphasis on the foundational concepts of adult learning theory and its application to the development and use of instructional methods, curriculum design, and procedures for adult workforce and professional education. Graded on A-F basis only.

Credit Hours: 3

LTC_V 4570: Career Guidance

Problems, methods, and procedures involved in assisting individuals in choosing, preparing for, entering upon, and progressing in their career. For workforce development and human resource professionals, employment counselors, and teachers, counselors, and school administrators.

Credit Hour: 2-3

LTC_V 4710: Business Software Applications

Advanced concepts, features, and applications central to the major types of business software--spreadsheets, database management, word processing, graphics, and communications.

Credit Hours: 3

LTC_V 4750: Occupational Analysis

Techniques, procedures of analyzing occupations into their basic elements. Required of trade teachers, coordinators.

Credit Hours: 2

LTC_V 4910: Application of Adult Learning Concepts

(cross-leveled with LTC_V 7910). Course introduces students to the foundational concepts of adult learning theory, with a focus on the application of these theories to the development and use of instructional methods, curriculum design, and program development principles for instructors of adult learners in a variety of instructional settings. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ESC_PS 4115; junior standing

LTC_V 4920: Workforce Education and the Community College

(cross-leveled with LTC_V 7920). This course provides an overview of the philosophy, history, and development of the community college in America, and reviews the social, economic, and political forces affecting these institutions. It also explores the rationale and techniques for keeping instructional and organizational functions responsive to the changing educational and workforce needs of the community, with an emphasis on collaboration with public-sector economic development and workforce training programs and customized training services for private sector organizations. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Junior standing or instructor approval

LTC_V 7083: Teaching Personal Finance Literacy

(same as FINPLN 7083) Principles and practices of teaching personal finance with particular emphasis on income, money management, spending and credit, and savings and investing. Course graded on A-F basis only.

Credit Hours: 3

LTC_V 7085: Problems in Curriculum and Instruction-CTE

Study of professional programs and issues or technical problems related to the field of career and technical education.

Credit Hour: 1-99

LTC_V 7570: Career Guidance

(cross-leveled with LTC_V 4570). Problems, methods, procedures involved in assisting individuals in choosing, preparing for, entering upon, progressing in their vocation. For teachers, counselors, school administrators. Graded on A-F basis only.

Credit Hour: 2-3

LTC_V 7750: Occupational Analysis

Techniques, procedures of analyzing occupations into their basic elements. Required of trade teachers, coordinators.

Credit Hours: 2

LTC_V 7910: Application of Adult Learning Concepts

(cross-leveled with LTC_V 4910). Course introduces students to the foundational concepts of adult learning theories, with a focus on the application of these theories to the development and use of instructional methods, curriculum design, and program development principles for instructors of adult learners in a variety of instructional settings. Graded on A-F basis only.

Credit Hours: 3

LTC_V 8085: Problems in Workforce and Professional Education

Independent, directed study on a topic in the areas of workforce, professional, or technology education.

Credit Hour: 1-99

LTC_V 8190: Research Applications for Career and Technical Education

Interpretation, evaluation, and application of research methodologies and findings in career and technical education.

Credit Hours: 3

LTC_V 8210: Program Development in Adult Workforce Education

The adult workforce and professional education movement; characteristics of and learning principles applied to adult students; instructional materials, methods and procedures in organizing and operating adult vocational education programs. Graded on A-F basis only.

Credit Hours: 3

LTC_V 8310: Foundations of Career and Technical Education

Philosophy, background, nature, purpose, and role of career and technical education programs in secondary and post-secondary education and workforce development. For teachers and administrators working with career and technical education programs. Graded on A-F basis only.

Credit Hours: 3

LTC_V 8350: Curriculum Development for Workforce and Professional Education

In-depth investigation of curriculum development theory, research, issues, and procedures for workforce and professional education in the public and private sectors.

Credit Hours: 3

LTC_V 8501: Topics in Workforce and Professional Education

Topics in the field of workforce, professional, or technology education in the CTE program areas.

Credit Hour: 1-99

LTC_V 8510: Evaluation in Workforce and Professional Education

Development of evaluation procedures and the construction of evaluation devices for workforce and professional education. Emphasizes performance evaluation, improvement of instruction, and program review.

Credit Hours: 3

LTC_V 8520: Implementation of Career and Technical Education Programs

Types of organization, approved administrative and supervisory practices, and state and federal guidelines for programs of career and technical education. Graded on A-F basis only.

Credit Hours: 3

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 2044: Inquiry into Schools, Community and Society: Field

This field experience course supports the Inquiring into Schools, Community and Society (ISCS), component of Phase I. Graded on S/U basis only.

Credit Hour: 1

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 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 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 supports the LTC 4120 component of Phase II. Field experience expectations are delineated in the LTC 4120 course syllabi. Graded on a S/U basis only.

Credit Hours: 3

Corequisites: LTC 4120 and LTC 4210

Recommended: Admittance to Phase II

LTC 4130: Teaching and Learning Math, Science and Social Studies w/ Young Children

(cross-leveled with LTC 7130). Strategies for assessing and supporting young children's math, science and 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: 9

Corequisites: LTC 4134

Recommended: Admittance to Phase II

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 S/U 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 social studies in the elementary school. The course is designed to provide the student with the skills to plan, implement, and evaluate both the teaching and learning processes for the elementary social studies classroom.

Credit Hours: 3

Recommended: Admittance to Phase II

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 S/U basis only.

Credit Hour: 1-3

Recommended: Admittance to Phase II

LTC 4300: Learning and Teaching Number and Operation in the Elementary School

The purpose of this course is to (a) develop a deeper understanding of number and operation, (b) connect the mathematical knowledge of number as described in (a) to the learning and teaching of number in elementary school.

Credit Hours: 3

Recommended: Admittance to Phase II

LTC 4310: Learning and Teaching Geometry in the Elementary School

The purpose of this course is to (a) develop a deeper understanding of geometry and measurement, (b) critically examine content and issues of the complexities in teaching and learning fundamental concepts of geometry and measurement in elementary schools.

Credit Hours: 3

Recommended: Admittance to Phase II

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

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

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 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

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 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). Students work in a collaborative setting with K-12 educations in the host country. Components of this experience include research, discussion, electronic communication, in-country observations, and co-teaching experiences with a focus on the host-country education and culture.

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 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

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

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

LTC 7130: Teaching & Learning Math, Sci. & Social Studies w/Young Children

(cross-leveled with LTC 4130). Strategies for assessing and supporting young children's math, science and 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: 9

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

LTC 7140: Curriculum, Theory and Classroom Management in Early Childhood Education

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

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

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

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

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

Linguistics and pedagogical principles of teaching English to speakers of other languages. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ENGLISH 7600 and ENGLISH 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

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

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

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

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

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). Students work in a collaborative setting with K-12 educators in the host country. Components of this experience include research, discussion, electronic communication, in-country observations, and co-teaching experiences with a focus on the host-country education and culture.

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 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

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

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: Theory, Policy, and Practice

(same as ED_LPA 8653). Overview of the theory, policy, and practice of using at least two languages in education to develop children's bi/multilingualism. Key topics include: (1) models of bilingual/multilingual education; (2) policy and politics of language education in the U.S. and international contexts; (3) psycholinguistic and sociocultural perspectives on bi/multilingual language development, as related to schooling; and (4) evaluation and assessment issues in bi/multilingual education.

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 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 8724: College Science Teaching

(same as BIO_SC 8724, PHYSCS 8310 and 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 BIO_SC 8725 and 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 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

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

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: 2

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/Masurement 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

LTC 8951: Grounded Theory and Situated Inquiry

(same as LTC 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 and 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 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 9620: Qualitative Methods in Educational Research II

(same as ED_LPA 9620 and 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 policies 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
