TLPL - TEACHING AND LEARNING, POLICY AND LEADERSHIP

TLPL401 Student-Centered Curriculum and Instruction (3 Credits)
A focus on using student-centered teaching and learning approaches in high school STEM classrooms. Students will develop and implement a multi-day series of lessons, building upon the foundations of inquiry-based practices developed in prior courses. Students will also consider the implications of cultural awareness on teaching practices broadly, as well as in the specific contexts of their fieldwork.
Prerequisite: Permission of instructor; and TLPL102; and must have completed or be concurrently enrolled in TLPL488M.
Credit Only Granted for: TLPL488P or TLPL401.
Formerly: TLPL488P
Additional Information: Field experience for this course will require students to be available for a 2-4 hour block of time at various points throughout the semester to complete observations and teach lessons between 8:00 a.m. and 3:30 p.m. A background check is required and will be facilitated through the Terrapin Teacher program coordinator.

TLPL403 Teaching and Learning High School Mathematics (3 Credits)
Methods of teaching and assessing the high school mathematics curriculum; aligning tasks and activities to curriculum standards; lesson planning; and selection and use of technology. The course also focuses on managing large group dynamics in the high school mathematics classroom.
Prerequisite: Must have 2 semesters of calculus; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Corequisite: EDCI355.
Restriction: Must be in Secondary Educ: Mathematics program; and minimum cumulative GPA of 2.75. Or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI455 or TLPL403.
Formerly: EDCI455.

TLPL406 Teaching and Learning Mathematics in the Elementary School, Part 1 (3 Credits)
Focuses on teaching and learning whole numbers. Special emphasis will be placed on developing equitable teaching practices that enable culturally and linguistically diverse students to develop knowledge and skills that promote mathematical proficiency. Mathematical concepts: Content knowledge: some aspects of early numeracy, whole numbers and the four arithmetic operations, some aspects of algebraic thinking. Jointly offered with: TLPL607.
Credit Only Granted for: TLPL607 or TLPL406.

TLPL407 Teaching and Learning Mathematics in the Elementary School, Part 2 (3 Credits)
Focuses on teaching and learning rational numbers (fractions and decimals) and developing algebraic thinking. Special emphasis will be placed on developing equitable teaching practices that enable culturally and linguistically diverse students to develop knowledge and skills that promote mathematical proficiency. Mathematical concepts: Content knowledge: rational numbers (fractions and decimals) and the four arithmetic operations, algebraic thinking, some aspects of geometry and measurement.
Credit Only Granted for: TLPL488G or TLPL407.

TLPL413 Teaching and Learning Middle School Mathematics (3 Credits)
Methods of teaching and assessing the middle school mathematics curriculum. Understanding the conceptual difficulties students have in moving from whole numbers to rational numbers, additive thinking to multiplicative thinking, and arithmetic to algebra. Lesson planning and selection of technology and other materials are applied in the context of supervised tutoring of students having difficulty in middle school mathematics. Lab and field experience required. Supervised tutoring takes place on site at a local middle school therefore TLPL413 students will be expected to travel to a local middle school for 8-10 of the class meetings.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI457 or TLPL413.
Formerly: EDCI457.

TLPL414 Knowing and Learning in Mathematics and Science (3 Credits)
Special and intensive treatment of current topics and issues in mathematics and science teaching and learning, policy and leadership. The overall goal of the course is to orient future teachers to the discourses and theories that shape what we know about how students learn math and science.
Prerequisite: Must have completed or be concurrently enrolled in TLPL102.
Credit Only Granted for: TLPL488M or TLPL414.
Formerly: TLPL488M.

TLPL415 Perspectives in Science (3 Credits)
Overview of the history of science and philosophical perspectives on science, particularly as they apply to science teaching.
Prerequisite: Permission of instructor.
Credit Only Granted for: TLPL488W or TLPL415.
Formerly: TLPL488W.

TLPL418 Teaching Residency (3-9 Credits)
An extended teaching internship in an Elementary Professional Development School. School placements to be arranged.
Prerequisite: Must have completed or be concurrently enrolled in TLPL352, TLPL363, TLPL372, TLPL415.
Restriction: Restricted to Elementary Education majors with permission of the Department. 2.75 GPA required.
Repeatable to: 12 credits.
Credit Only Granted for: TLPL418 or EDCI481.

TLPL420 Knowledge, Reasoning, and Learning in Science (3 Credits)
For prospective science teachers. Investigations of the nature of knowledge, reasoning, and learning in middle and secondary science. Readings from cognitive science and science education research; studies of student thinking in interview and classroom observations; analyses of curricula. Includes laboratory and field experiences.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: TLPL420 or EDCI411.
Formerly: EDCI411.

TLPL421 Practices in Secondary School Science Teaching (2 Credits)
Analyses of student thinking, instructional interpretations, strategies, and techniques in the teaching internship.
Prerequisite: TLPL425.
Corequisite: EDCI471 and EDCI474.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department; and must be in Secondary Educ: Science program. Or minimum cumulative GPA of 2.75.
Credit Only Granted for: TLPL421 or EDCI480.
Formerly: EDCI480.
TLPL423 Interdisciplinary Teaching in the Middle Grades I (2 Credits)
For prospective middle school teachers. Studying and planning interdisciplinary instructional practices in middle school. Utilizes context and experiences from students’ field placements. Use of technology and incorporation of technology into instruction.
Prerequisite: TLPL413 and TLPL420; or permission of instructor.
Corequisite: EDCI466 or TLPL423.
Restriction: Minimum cumulative GPA of 2.75; and must be in the Middle School Teacher Education Program, major code 0804P.
Credit Only Granted for: EDCI413 or TLPL423.
Formerly: EDCI413.

TLPL424 Interdisciplinary Teaching in the Middle Grades II (2 Credits)
For prospective middle school teachers. Planning and implementing interdisciplinary instructional practices in middle school. Draws on the context and experiences in the student teaching placement. Use of technology and incorporation of technology into instruction.
Prerequisite: EDCI460 and TLPL423.
Corequisite: TLPL476 and EDCI466.
Restriction: Minimum cumulative GPA of 2.5; and must be in the Middle School Teacher Education Program.
Credit Only Granted for: EDCI414 or TLPL424.
Formerly: EDCI414.

TLPL425 Learning and Teaching in Science (3 Credits)
Studies of student learning and instructional practices in science teaching.
Prerequisite: TLPL420; or permission of instructor.
Restriction: Must be in Secondary Educ: Science program.
Credit Only Granted for: EDCI470 or TLPL425.
Formerly: EDCI470.

TLPL430 Field Experience in Art Education (1 Credit)
Practical classroom experience in teaching/evaluating/exhibiting the products of art lessons.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department; and must be in Secondary Educ: Art program.
Credit Only Granted for: EDCI400 or TLPL430.
Formerly: EDCI400.

TLPL431 Student Teaching in Elementary School: Art (4-8 Credits)
Prerequisite: TLPL435.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department; and must be in Secondary Educ: Art program.
Credit Only Granted for: EDCI401 or TLPL431.
Formerly: EDCI401.

TLPL432 Student Teaching in Secondary Schools: Art (2-8 Credits)
Prerequisite: TLPL435.
Restriction: Minimum cumulative GPA of 2.75; and must be in Secondary Educ: Art program; and permission of Teaching and Learning, Policy and Leadership Department.
Credit Only Granted for: EDCI402 or TLPL432.
Formerly: EDCI402.

TLPL433 Foundations of Art Education (3 Credits)
Introduction to the field of Art Education and the role of the visual arts in grades PreK-12 for today's diverse school populations. The fundamental, historical and philosophic components of art education with an emphasis on arts disciplines and curriculum. Includes a school-based practicum. For those considering art education as a major.
Restriction: Minimum cumulative GPA of 2.75.
Credit Only Granted for: EDCI403 or TLPL433.
Formerly: EDCI403.

TLPL434 Student Teaching Seminar: Art Education (3 Credits)
An analysis of teaching theories, strategies, and techniques in the student teaching experience.
Prerequisite: TLPL435 and TLPL430.
Corequisite: TLPL432 and TLPL431.
Restriction: Minimum cumulative GPA of 2.75; and must be in Secondary Educ: Art program.
Credit Only Granted for: EDCI404 or TLPL434.
Formerly: EDCI404.

TLPL435 Art Education Methods I (3 Credits)
Methods I provides future art teachers with a knowledge base of the theories and best practices of effective pedagogy for teaching methods and strategies, diversity, motivational techniques, classroom management, assessment and evaluation methods, and accommodating all students including those with special needs.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department. And must be in Secondary Educ: Art program; or must be in Secondary Educ: Art pre-major program.
Credit Only Granted for: EDCI405 or TLPL435.
Formerly: EDCI405.

TLPL436 Studio Processes and Materials: 2D (3 Credits)
A discussion/studio format used to develop skills, materials, resources and education strategies for using technology and two-dimensional art in K12 programs.
Prerequisite: ARTT210.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department; and junior standing or higher; and must not be in any of the following programs (Early Childhood Education; Elementary Education; Secondary Educ: Science; Secondary Educ: English Language Arts; Secondary Educ: Mathematics; Secondary Educ: Foreign Languages; Secondary Educ: Social Studies; Physical Education; Music Education; Special Education).
Credit Only Granted for: EDCI406 or TLPL436.
Formerly: EDCI406.

TLPL437 Studio Processes and Materials: 3D (3 Credits)
A lecture-studio course to develop skills, material resources, and educational strategies for three-dimensional projects in school settings.
Restriction: Must be in Secondary Educ: Art program; or must be a Pre-Art Education Major.
Credit Only Granted for: EDCI407 or EDCI437.
Formerly: EDCI407.

TLPL440 Issues in the Education of English Language Learners (3 Credits)
Introduction to and analysis of current and historical research, practice, trends, and public policy issues in education as they relate to English language learners in K-12 and other settings.
Credit Only Granted for: EDCI432 or TLPL440.
Formerly: EDCI432.
TLPL441 Pedagogy of Teaching English Language Learners (3 Credits)
A survey of the historical and current approaches, methods, and techniques of teaching English to speakers of other languages, from grammar translation and audiolingual to communicative and task-based approaches will be presented. Additionally, successful classroom practices that address the needs of culturally diverse and language minority students will be analyzed. Students will have the opportunity to discuss, probe and apply theories and principles to hands-on teaching practices in real-life settings. Digital technologies that assist teaching English language learners (ELLs) will be emphasized as well.
Credit Only Granted for: EDCI435 or TLPL441.
Formerly: EDCI434.

TLPL442 Foundations of Literacy and Biliteracy Development (3 Credits)
An overview of the research on literacy and biliteracy development for English learners. Specifically, the course explores the theoretical models and processes of teaching reading and writing, current literacy/biliteracy issues, assessment, and strategies for developing literacy and biliteracy skills for English learners.
Credit Only Granted for: EDCI435 or TLPL442.
Formerly: EDCI435.

TLPL443 Understanding Cross-Cultural Communication for Teaching English Language Learners (3 Credits)
Theories of intercultural communication and techniques for applying them in the teaching of English as a second language (ESL) and content classes. Research and evaluation of selected aspects of a culture as basis for creating, selecting and using culturally-responsive teaching materials and methods.
Credit Only Granted for: EDCI436 or TLPL443.
Formerly: EDCI436.

TLPL444 English Grammar Pedagogy for Teachers of English Language Learners (3 Credits)
Methods of teaching English grammar to English language learners. The role of teaching grammar. Effective methods and techniques for incorporating grammar in other communication activities.
Credit Only Granted for: EDCI437 or TLPL444.
Formerly: EDCI437.

TLPL445 Methods I: K-12 World Language Methods and Technology (3 Credits)
The first of two sequential courses required for achieving competence in teaching a foreign language. The sequel to this course is EDCI433 (Methods II) entitled: Advanced K-12 Foreign Language Methods and Technology. EDCI410 requires on-going examination of theories relevant to language acquisition. Students will also investigate the instructional methods that reflect those theories. Lab and field experiences required.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI410, TLPL445, EDCI688K, or TLPL695.
Formerly: EDCI410.

TLPL446 Language Variation and Multilingualism in Elementary Classrooms (3 Credits)
Issues in language variation and multilingualism in elementary classrooms, schools and communities with a focus on classroom practice, assessment, and policy.
Restriction: Must be in Elementary Education program; and minimum cumulative GPA of 2.75. Or permission of EDUC-Teaching and Learning, Policy and Leadership department.

TLPL447 Art Education Methods II (3 Credits)
Methods II builds upon the pedagogical foundation of Methods I and provides future art teachers with the means for developing pre K-12 art lessons and unit plans for a balanced qualitative art program for today’s diverse and inclusive schools and classrooms.
Prerequisite: TLPL435; or students who have taken courses with comparable content may contact the department.
Corequisite: EDCI438.
Restriction: Minimum cumulative GPA of 2.75; and must be in Secondary Educ: Art program.
Credit Only Granted for: EDCI435, EDCI603, TLPL447 or TLPL633.
Formerly: EDCI423.

TLPL450 Advanced K-12 World Language Methods and Technology (3 Credits)
Teaches advanced best practices for effective foreign language instruction. Topics include: using authentic assessment and materials, applying national standards, teaching writing and culture, motivating students, providing strategy instruction, infusing technology, preparing for K-12 employment, and creating a professional portfolio.
Prerequisite: TLPL445.
Corequisite: EDCI438.
Restriction: Must be in Secondary Educ: Foreign Languages program; and minimum cumulative GPA of 2.75. Or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI433, EDCI688A, TLPL450 or TLPL696.
Formerly: EDCI433.

TLPL451 Teaching and Learning in Secondary Education: English (3 Credits)
An introduction for prospective middle and secondary English teachers into the basic issues, concepts, orientations, and processes that shape the teaching of English for diverse students in schools. Candidates explore their own perspectives in relation to local and national trends and develop basic teaching understanding and skills through on-campus seminars, teaching laboratory experiences, and guided field experiences. Students should reserve one full day or two half days per week for field experience.
Credit Only Granted for: EDCI416 or TLPL451.
Formerly: EDCI416.

TLPL452 Bases for English Language Instruction (3 Credits)
Examines current theory, research, best practice, curricula and materials focused on the teaching of English language to native and non-native English learners. Topics include morphology, syntax, semantics, vocabulary, pragmatics, argument, discourse structure, dialects, edited academic English, English language proficiency (listening, speaking, vocabulary, pragmatics, argument, discourse structure, dialects, edited academic English, English language proficiency (listening, speaking, reading, writing) assessment, and instructional planning. English Language Learner (TESOL and SIOP) and special needs (inclusion) pupil issues considered.
Restriction: Must be in Secondary Educ: English Language Arts program; and minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI417 or TLPL452.
Formerly: EDCI417.

TLPL453 Life in Two Languages: Understanding Bilingual Communities and Individuals (3 Credits)
Overview of society and individual multilingualism. Topics include diglossia, language shift, codeswitching, bilingual first language acquisition, language attrition, dual language education policy and practice.
TLPL456 Teaching Writing (3 Credits)
Examines current theory, research, best practice, curricula and materials for teaching written communication in grades K-12. Focuses on analytical, argumentative, informative/explanatory, literary analysis, narrative, descriptive, and research writing. Emphasizes instructional planning, assessment, writer problem-solving strategies, information search, development, organization and style appropriate to task, purpose and audience for both non-digital and digital text. English Language Learner and special needs pupil issues considered.
Corequisite: EDCI447.
Restriction: Must be in Secondary Educ: English Language Arts program; and minimum cumulative GPA of 2.75. Or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI467 or TLPL456.
Formerly: EDCI467.

TLPL457 Literature for Adolescents (3 Credits)
Reading and analysis of fiction and nonfiction; methods for critically assessing quality and appeal; current theory and methods of instruction; research on response to literature; curriculum design and selection of books.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI466 or TLPL457.
Formerly: EDCI466.

TLPL460 Materials and Instruction for Creating Skilled and Motivated Readers, Part I (3 Credits)
Selecting, evaluating, and using a variety of materials and instructional strategies to create skilled and motivated readers in the elementary grades; Topics include emergent literacy, vocabulary development, reading comprehension and oral reading fluency in diverse classroom settings.
Restriction: Must be in Elementary Education program; and junior standing or higher. Or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI461 or TLPL460.
Formerly: EDCI461.

TLPL461 Materials and Instruction for Creating Skilled and Motivated Readers, Part II (3 Credits)
Selecting, evaluating, and using a variety of materials to create skilled and motivated readers in the elementary grades, particularly in diverse classroom settings; Topics include word analysis, spelling, writing, reading comprehension strategies, directed reading lessons, and explicit instruction.
Prerequisite: TLPL361 and TLPL460.
Corequisite: TLPL312, EDCI342, TLPL321, and TLPL362.
Restriction: Minimum cumulative GPA of 2.75; and permission of EDUC-Teaching and Learning, Policy and Leadership department; and must be in Elementary Education program.
Credit Only Granted for: EDCI462 or TLPL461.
Formerly: EDCI462.

TLPL462 Reading in the Secondary School (3 Credits)
Provides secondary school teachers with understanding the need for and approaches to teaching students to read and learn from content area texts.
Restriction: Minimum cumulative GPA of 2.75; and must be in one of the following programs (Middle School Education; Secondary Educ: Science; Secondary Educ: English Language Arts; Secondary Educ: Mathematics; Secondary Educ: Foreign Languages; Secondary Educ: Social Studies; Secondary Educ: Art); and permission of department required for post-baccalaureate students.
Credit Only Granted for: EDCI463 or TLPL462.
Formerly: EDCI463.

TLPL470 Knowledge, Reasoning, and Learning in Secondary Social Studies (3 Credits)
An exploration of the nature of knowledge and reasoning in social studies disciplines as well as how students learn social studies. Assessment and investigation of students' conceptions and misconceptions as well as their disciplinary thinking. Implications for teaching and initial lesson design are explored through on-campus seminars as well as guided field experiences. Students should reserve a regular half-day per week for the field experience in local schools. This course is required for admission to the secondary social studies double major.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department; and minimum cumulative GPA of 2.75.
Credit Only Granted for: EDCI426 or TLPL470.
Formerly: EDCI426.

TLPL471 Curriculum, Teaching, and Assessment in Secondary Social Studies (3 Credits)
An exploration of curriculum development, teaching, and assessment in secondary history/social studies. Focus on identifying students' conceptions of social studies topics and designing lessons that advance students' disciplinary thinking and understanding.
Prerequisite: TLPL470.
Corequisite: EDCI426.
Restriction: Must be in Secondary Educ: Social Studies program; and minimum cumulative GPA of 2.75. Or permission of EDUC-Center for Learning & Educational Technology.
Credit Only Granted for: EDCI427 or TLPL471.
Formerly: EDCI427.

TLPL475 Equitable Classrooms (2 Credits)
An exploration and application of major theoretical frameworks surrounding equity and critical pedagogy. Creating habits of mind that help teachers see all students as capable of achieving at high levels. Draws on the concurrent field experience.
Prerequisite: TLPL252, TLPL413, and TLPL420.
Corequisite: EDCI360 and TLPL423.
Restriction: Minimum cumulative GPA of 2.75; and must be in Middle School Education program.
Credit Only Granted for: EDCI424 or TLPL475.
Formerly: EDCI424.
TLPL476 Equity and Pedagogy (2 Credits)
An exploration and application of major theoretical frameworks surrounding equity and critical pedagogy. Pedagogical decision making that leads to greater equity and improved student learning for all students. Draws on the concurrent student teaching experience.
Prerequisite: TLPL475.
Corequisite: TLPL424 and EDCI460.
Restriction: Minimum cumulative GPA of 2.75; and must be in one of the following programs (Middle School Education; Early Childhood Education; Elementary Education; Secondary Educ: Science; Secondary Educ: English Language Arts; Secondary Educ: Mathematics; Secondary Educ: Foreign Languages; Secondary Educ: Social Studies; Physical Education; Music Education; Secondary Educ: Art; Special Education).
Credit Only Granted for: TLPL476.
Formerly: EDCI425.

TLPL478 Professional Seminar in Education (1-3 Credits)
Seminar on the issues and problems teacher candidates encounter in classrooms. Exploration of the skills and strategies that best address these challenges.
Restriction: Must be in a major within the EDUC-Teaching and Learning, Policy and Leadership department.
Repeatable to: 4 credits.
Formerly: EDCI488.

TLPL479 Field Experiences in Education (1-4 Credits)
Field experiences in approved education setting with appropriate supervision. Credit not to be granted for experience accrued prior to registration. Open only to students admitted to approved teacher education programs.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Repeatable to: 2 credits.
Formerly: EDCI489.

TLPL481 Embracing Diversity in the Classroom Community (3 Credits)
An exploration of the richness and complexity of student diversity that teacher candidates will encounter in K-12 classrooms. Students will engage in critical reflection around diversity and equity issues.
Restriction: Admission to teacher education program; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: TLPL481 or EDCI475.
Formerly: EDCI475.

TLPL488 Special Topics in Education (1-3 Credits)
Special and intensive treatment of current topics and issues in teaching, learning, policy and leadership.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDPS488 or TLPL488.
Formerly: EDPS488.

TLPL489 Internship in Education (1-12 Credits)
Internship or residency experiences in school settings with appropriate supervision. Credit not to be granted for experience accrued prior to registration. Open only to students admitted to approved teacher education programs.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Repeatable to: 12 credits.
Credit Only Granted for: EDPS489 or TLPL489.
Formerly: EDPS489.

TLPL498 Special Problems in Education (1-3 Credits)
Exploration of current problems in teaching, learning, policy and leadership. Available only to students who have definite plans for study of approved problems.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDPS498 or TLPL498.
Formerly: EDPS498.

TLPL499 Workshops, Clinics, and Institutes (1-6 Credits)
The following type of educational enterprise may be scheduled under this course heading: Workshops conducted by the College of Education (or developed cooperatively with other colleges and universities) and not otherwise covered in the present course listing; clinical experiences in pupil-testing centers, reading clinics, speech therapy laboratories, and special education centers; institutes developed around specific topics or problems and intended for designated groups such as school superintendents, principals, and supervisors.
Credit Only Granted for: EDPS499 or TLPL499.
Formerly: EDPS499.

TLPL600 Teaching and Learning with Technology (3 Credits)
Provides a concrete, hands-on introduction to teaching and learning with technology. We will explore digital technology and its impact on learning and institutions. We will consider big ideas of the field as well as specific types of learning technologies and pedagogies for use in K-12 classrooms. We will discuss K-12 teaching methods that address the interdisciplinary nature of technology integration. The course will draw on class discussions, inquiry, instructional technology, and collaborative lab-based activities and prepare you to merge technology with your current teaching practice. Assessment with and of technology will also be explored.
Credit Only Granted for: EDCI687 or TLPL600.
Formerly: EDCI687.

TLPL602 Foundations of Technology in Education (3 Credits)
Provides a big-picture survey of technology in education and lays the groundwork for future coursework on the role of technology in education. This course will tackle both theoretical and practical dimensions of technology in education. After completing this course, students will have an understanding of the potential for the uses of technology for teaching and learning, identify the different roles technology can play and be ready for a hands-on introduction to specific topics/tools/pedagogies related to teaching and learning with technology.

TLPL603 Data-driven Decision Making in Schools and Classrooms (3 Credits)
Equips educators to use the data that surrounds them productively. This includes data students generate that can be used to improve student learning outcomes as well as data generated by the classroom and school that can be used to improve pedagogy and classroom culture. After completing this course, students will be better able to collect, analyze, and make decisions based on the data generated by their students and peers.

TLPL604 Teaching Science and Social Studies through Environmental Study (3 Credits)
Curriculum and instruction for science and social studies within a multicultural and environmental context; analysis of social studies and science curriculum materials; utilization of school and community resources.
Restriction: Must be in a major within the EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI695 or TLPL604.
Formerly: EDCI695.
TLPL605 Social, Cultural & Ethical Dimensions of Teaching and Learning with Technology (3 Credits)
Situates technology in the classroom within a larger social and cultural context. Along with exploring social opportunities afforded by technology, this course will cover important cultural and ethical dimensions of technology, including equity, inclusion, access, and questions of privacy and digital citizenship (for both teachers and students). After completing this course, students will be prepared to bring technology into their classrooms in responsible and safe ways while being able to take advantage of the new forms of interaction, instruction, and communication made possible through technology.

TLPL606 Teaching and Learning Mathematics in Secondary Schools (3 Credits)
Objectives, selection and organization of subject matter, appropriate methods, lesson plans, textbooks, technology and other instructional materials; assessment of student learning and other topics pertinent to secondary mathematics education. Internship of other placement in a secondary mathematics classroom is required.
Prerequisite: Enrollment in a University of Maryland program leading to teacher certification; and bachelor’s degree in mathematics or related field; and 2 semesters of calculus.
Credit Only Granted for: EDCI651 or TLPL606.
Formerly: EDCI651.

TLPL607 Teaching and Learning Mathematics in the Elementary School (3 Credits)
Strategies and methodologies for the teaching of elementary school mathematics based on current research and theories about how children learn mathematics. Attention is given to professional recommendations and teaching practices that foster communication, reasoning, and reflection in the mathematics classroom. Internship or other placement in an elementary school is required.
Prerequisite: MATH212, MATH213, or MATH214; or students who have taken courses with comparable content may contact the department.
Credit Only Granted for: EDCI652 or TLPL607.
Formerly: EDCI652.

TLPL610 Trends in Mathematics Education (3 Credits)
Recent developments in educational thinking and practice which have affected the curriculum in mathematics.
Credit Only Granted for: EDCI650 or TLPL610.
Formerly: EDCI650.

TLPL611 Teaching and Learning Number in the Middle Grades (3 Credits)
Students develop reflective, theoretical perspectives toward and practical approaches for the teaching and learning of the number system in middle school. There is an emphasis on rational numbers and its pedagogical content knowledge.
Restriction: Admission to M.A. or M.Ed. w/ concentration in Mathematics Education; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI683 or TLPL611.
Formerly: EDCI683.

TLPL612 Teaching and Learning Algebra in the Middle School (3 Credits)
Designed to enhance middle school mathematics teachers’ content and pedagogical knowledge in algebra.
Prerequisite: Admission to M.A. or M.Ed. with concentration in Mathematics Education; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI655 or TLPL612.
Formerly: EDCI655.

TLPL613 Problem-Solving and Innovative Thinking in the Mathematics Classroom (3 Credits)
Curriculum and instruction for developing thinking skills through the discipline of mathematics. This is a hybrid course designed to blend on-campus class meetings with online experiences.
Prerequisite: Experience teaching mathematics K-12. And TLPL312; or TLPL413; or students who have taken courses with comparable content may contact the department.
Credit Only Granted for: EDCI653 or TLPL613.
Formerly: EDCI653.

TLPL614 Assessing Mathematical Understanding (3 Credits)
Techniques of assessing K-12 students’ understanding of mathematics - including standardized tests, but focusing on alternative forms such as individual interviews, writing tasks, performance tasks, portfolios. Mathematics assessment viewed as an ongoing part of instruction.
Prerequisite: TLPL610; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI654 or TLPL614.
Formerly: EDCI654.

TLPL615 Teaching and Learning Geometry in the Middle Grades (3 Credits)
Designed to enhance both the pedagogical and geometric content knowledge of middle school mathematics teachers.
Prerequisite: Admission to M.A. or M.Ed. with concentration in Mathematics Education; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI645 or TLPL615.
Formerly: EDCI645.

TLPL616 Teaching and Learning Statistics in the Middle School (3 Credits)
Designed to enhance both the pedagogical and statistical/data analysis content knowledge of middle school mathematics teachers.
Prerequisite: Admission to M.Ed. or M.A. program in EDCI with concentration in Mathematical Education.
Credit Only Granted for: EDCI656 or TLPL616.
Formerly: EDCI656.

TLPL617 Understanding and Engaging Students’ Conceptions of Mathematics (3 Credits)
Research related to K-14 students’ common errors in and (mis)understandings of mathematics. Instructional strategies useful in building on errors and changing students’ conceptions.
Prerequisite: Experience in teaching math; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI657 or TLPL617.
Formerly: EDCI657.

TLPL618 Digital Learning Tools and Communities (1 Credit)
Addresses the student learning outcomes outlined by the Interstate Teacher Assessment and Support Consortium (inTASC). When this course is successfully completed, students will be able to competently integrate technology into instruction to support student learning and develop research-based strategies for instructional and school improvement. Students are expected to demonstrate proficiency in each of the seven Maryland Teacher Technology Standards as well as the International Society for Technology Educator Standards.
Restriction: Must be in a Master of Education Teacher Certification Program.
Repeatable to: 3 credits.
TLPL620 Trends in School Curriculum: Science (3 Credits)
Recent developments in educational thinking and practice on the curriculum in science education.
Credit Only Granted for: EDCI670 or TLPL620.
Formerly: EDCI670.

TLPL621 Learning and Teaching in the Physical Sciences I (3 Credits)
Engagement in laboratory and inquiry-based methods to develop coherent understandings about the physical world and explore issues in the physical sciences. Personal engagements with phenomena and reflection on the learning and instructional experiences.
Restriction: Enrollment in an EDCI Outreach Program in science education; or must be in Curriculum and Instruction (Master's) program; or permission of instructor.
Credit Only Granted for: EDCI604 or TLPL621.
Formerly: EDCI604.

TLPL622 Learning and Teaching in the Physical Sciences II (3 Credits)
A second course in a sequence using laboratory and inquiry-based method to study physical science learning and teaching. Candidates will move toward more sophisticated understandings of elementary/middle school curriculum topics in the physical sciences. Personal engagement with phenomena and reflection on the learning and instructional experiences.
Prerequisite: TLPL621; or permission of instructor.
Credit Only Granted for: EDCI605 or TLPL622.
Formerly: EDCI605.

TLPL623 Learning and Teaching Biological Sciences (3 Credits)
Engagement in laboratory and inquiry-based methods to develop coherent understandings about the natural world and explore issues learning in biology. Personal engagement with phenomena and reflection on the learning and instructional experiences.
Restriction: Enrollment in an EDCI Outreach Program in science education; or must be in Curriculum and Instruction (Master's) program; or permission of instructor.
Credit Only Granted for: EDCI606 or TLPL623.
Formerly: EDCI606.

TLPL624 Learning and Teaching in the Biological Sciences II (3 Credits)
A second course in a sequence using laboratory and inquiry-based method to study learning and teaching in biology. Candidates will move toward more sophisticated understandings of elementary/middle school curriculum topics in the life sciences. Personal engagement with phenomena and reflection on the learning and instructional experiences.
Prerequisite: TLPL623; or permission of instructor.
Credit Only Granted for: EDCI607 or TLPL624.
Formerly: EDCI607.

TLPL625 Teaching Science in Elementary Schools (3 Credits)
Identification of problems in teaching science. Methods for improving the effectiveness of science education.
Credit Only Granted for: EDCI671 or TLPL625.
Formerly: EDCI671.

TLPL626 Learning to Teach and Learn Science (3 Credits)
Developing practices of instruction in science teaching in the context of understanding student science learning.
Prerequisite: TLPL420; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Restriction: Must be in the Maryland Master's Certification program; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI675 or TLPL626.
Formerly: EDCI675.

TLPL627 Reflection and Practice in Secondary School Science Teaching (3 Credits)
Use of classroom videotape and student work as data for teachers to analyze their students’ thinking and discuss instructional interpretation, strategies, and techniques in the specific contexts of their classes.
Prerequisite: TLPL626; or permission of instructor.
Restriction: Must be in the Maryland Master's Certification program.
Credit Only Granted for: EDCI676 or TLPL627.
Formerly: EDCI676.

TLPL630 Trends in Art Education Curriculum (3 Credits)
Recent developments in art education.
Credit Only Granted for: EDCI600 or TLPL630.
Formerly: EDCI600.

TLPL631 Historical Foundations of the Arts in Education (3 Credits)
An investigation into major historical events and underlying beliefs, values and practices that influence contemporary arts education (visual art, drama, dance, music) at all levels of instruction. Selected literature that focuses on cultural contexts, individuals, institutions, events and national and international perspectives is used to investigate changing conceptions and practices of arts education.
Credit Only Granted for: EDCI601 or TLPL631.
Formerly: EDCI601.

TLPL632 Understanding and Teaching Aesthetics (3 Credits)
Critical investigation of art, and curriculum implications.
Credit Only Granted for: EDCI602 or TLPL632.
Formerly: EDCI602.

TLPL633 Integrated Art Methods (3 Credits)
Builds upon the pedagogical foundation of an initial art education methods course and provides future art teachers with the means for developing PreK-12 art lesson/unit plans for a balanced qualitative art program for today’s diverse and inclusive schools/classrooms. Integrating art with other subject areas.
Prerequisite: EDCI680; or TLPL435.
Restriction: Must be in a major within the EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI423, EDCI603, TLPL447 or TLPL633.
Formerly: EDCI603.

TLPL634 Teaching Language Arts in Elementary Schools (3 Credits)
Analysis of current issues, trends, and problems in language-arts instruction.
Credit Only Granted for: EDCI643 or TLPL634.
Formerly: EDCI643.

TLPL635 Coaching and Mentoring Teachers: Literacy Across Content Areas (3 Credits)
Provides knowledge on coaching and mentoring teachers in school district and school settings based on Standards for Middle and High School Literacy Coaches as well as current theory, research and best practice supporting the efficacy of literacy coaching. Emphasis on understanding reading process/strategy instruction; writing process/ strategy instruction; and gathering and interpreting valid and reliable assessment data for creating district-wide and school-based literacy intervention plans.
Prerequisite: Enrolled in EDCI post-baccalaureate certificate Program in Literacy coaching.
Restriction: Must be in Curriculum and Instruction (Master's) program; and permission of instructor.
Credit Only Granted for: EDCI646 or TLPL635.
Formerly: EDCI646.
TLPL636 Trends in Secondary School Curriculum: English (3 Credits)
Recent developments in educational thinking and practice on the curriculum in English education.
Credit Only Granted for: EDCI640 or TLPL636.
Formerly: EDCI640.

TLPL637 Teaching for Equity in Bilingual/Dual Language Immersion Programs (3 Credits)
Focuses on how educators apply and reflect on teaching, learning and school practices aimed to achieve educational equity in dual language programs, including bilingual, two way, and one-way immersion K-12. This course will include instruction, discussion, and materials in a LOTE (Language other than English) to model bilingual instruction.

TLPL640 Assessing, Diagnosing, and Teaching Writing (3 Credits)
Examines current theory, research, best practice, curricula and materials for teaching written communication in middle and secondary schools in order to survey, review and select formal and informal assessments and diagnostic strategies useful for writing teachers. Focuses on validity and reliability issues. Includes instructional planning and development of instructional materials for implementing appropriate individual, small-group and large-group instruction. English Language Learner (TESOL and SIOP) and special needs (inclusion) pupil issues considered.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI673 or TLPL640.
Formerly: EDCI673.

TLPL641 Reading, Cognition, and Instruction: Reading in the Content Areas I (3 Credits)
Provides middle and secondary education students with an understanding of the interactive nature of the reading process, the use of research-based instructional strategies, the relationship between vocabulary development and student concept development, the design of strategic reading instruction, the methods for assessing content area literacy, and the ability to plan instruction and communicate with students, parents, and allied professionals.
Credit Only Granted for: EDCI625 or TLPL641.
Formerly: EDCI625.

TLPL642 Processes and Acquisition of Reading (3 Credits)
Addresses the ways in which social, cultural, cognitive and motivation factors influence the development of literacy. Focus is on reading acquisition and its underlying processes. Topics include language development in relation to reading development; the biological basis of this development; concepts in emergent literacy; models of reading acquisition and skilled reading; the effects of phonemic awareness and phonics on developing readers; factors in early childhood environments and in beginning literacy instruction that impact language and literacy achievement.
Restriction: For Master’s Certification Students only; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI626 or TLPL642.
Formerly: EDCI626.

TLPL643 Assessing Student Learning and Development (3 Credits)
Prepares experienced teachers to assess student knowledge, strategies and skills over time so that they can design instruction that builds on student strengths and addresses student needs. Teachers will study the purposes of assessment including school and student needs. Teachers will study the purposes of assessment including school and teacher accountability, student placement, course grade assignment and instructional design. They also will explore types of formal and informal assessment, curriculum-based and curriculum-free assessment, external and teacher made assessment.
Credit Only Granted for: EDCI612 or TLPL643.
Formerly: EDCI612.

TLPL644 Foundations of Reading (3 Credits)
Broad and comprehensive overview of reading and literacy and factors that may influence effective reading practices such as instruction, classroom environment and individual differences. Focus on different knowledge domains and traditions of inquiry related to reading and reading instruction.
Prerequisite: EDCI362; or TLPL462; or students who have taken courses with comparable content may contact the department.
Credit Only Granted for: EDCI660 or TLPL644.
Formerly: EDCI660.

TLPL645 Content Area Reading (3 Credits)
Research-based strategies for improving reading to learn in the content areas (K-12).
Prerequisite: EDCI362; or TLPL462; or students who have taken courses with comparable content may contact the department.
Credit Only Granted for: EDCI661 or TLPL645.
Formerly: EDCI661.

TLPL646 Linguistics in Education (3 Credits)
Provides teachers and educational researchers with the theoretical and technical knowledge of linguistics necessary to engage effectively in their fields.

TLPL647 Diagnostic Reading Assessment and Instruction (3 Credits)
Survey course in diagnostic reading assessment and instruction for graduate students not majoring in reading.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI662 or TLPL647.
Formerly: EDCI662.

TLPL650 Understanding, Evaluating and Using Research in School Reading Programs (3 Credits)
Focus on understanding, critiquing, and applying reading/literacy research; reviewing research to improve practice; analyzing data at the district, school, classroom, and student levels to improve reading instruction.
Credit Only Granted for: EDCI663 or TLPL650.
Formerly: EDCI663.

TLPL651 Leadership in Schoolwide Reading Program (3 Credits)
Preparation of reading personnel to function as resource persons to classroom teachers, administrators and the school community.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI666 or TLPL651.
Formerly: EDCI666.
TLPL652 Multicultural Materials and Instruction for P-12 Readers (3 Credits)
An exploration of the multicultural materials and instructional strategies that create responsive P-12 classrooms and curricula for diverse readers.

Credit Only Granted for: TLPL652 or EDCI667.
Formerly: EDCI667.

TLPL653 Clinical Assessment in Reading (3 Credits)
Clinical diagnostic techniques and materials for assessing reading strengths and needs.

Prerequisite: TLPL645 and TLPL650; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI664 or TLPL653.
Formerly: EDCI664.

TLPL654 Clinical Instruction in Reading (3 Credits)
Clinical procedures and materials for reading instruction.

Prerequisite: TLPL653; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI665 or TLPL654.
Formerly: EDCI665.

TLPL655 Student Assessment in the Second Language Classroom (3 Credits)
Analysis of standardized and teacher-made FL/ESL tests; emphasis on principles of FL/ESL test construction. Field testing of commercial and teacher-made materials.

Credit Only Granted for: EDCI631 or TLPL655.
Formerly: EDCI631.

TLPL656 Teaching Culturally and Linguistically Diverse Exceptional Learners (3 Credits)
Explores cross-cultural and linguistic diversity as they relate to identification procedures for and education of English learners with exceptional needs beyond the second language acquisition process such as learning disabilities and gifted & talented.

Credit Only Granted for: EDCI632 or TLPL656.
Formerly: EDCI632.

TLPL657 Teaching for Cross Cultural Communication (3 Credits)
Theories of intercultural communication and techniques for applying them in the teaching of English as a second language (ESL) and content classes. Research and evaluation of selected aspects of a culture as basis for creating, selecting and using culturally-responsive teaching materials and methods.

Credit Only Granted for: EDCI633 or TLPL657.
Formerly: EDCI633.

TLPL660 Foundations of Literacy and Biliteracy Development (3 Credits)
An overview of the research on literacy and biliteracy development for English learners. Specifically, the course explores the theoretical models and processes of teaching reading and writing, current literacy/biliteracy issues, assessment, and strategies for developing literacy and biliteracy skills for English learners.

Prerequisite: TLPL665.
Credit Only Granted for: EDCI636 or TLPL660.
Formerly: EDCI636.

TLPL661 Multiliteracies: Theory and Practice (3 Credits)
Explores the theoretical constructs and practical manifestations of multiliteracies in communities and schools by presenting an overview of the research on the constructs of New Literacy Studies, Critical Literacy, Digital Literacy, and Funds of Knowledge, as well as the practical implications of teaching reading and writing to culturally and linguistically diverse learners in content areas (i.e., language arts, math, science, social studies, etc.) in classrooms.

Prerequisite: TLPL665.
Credit Only Granted for: EDCI638, EDCI688J, or TLPL661.
Formerly: EDCI638 and EDCI688J.

TLPL662 Second Language Acquisition (3 Credits)
Major theoretical approaches to second language acquisition. For teaching English to speakers of other languages (TESOL).

Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI732 or TLPL662.
Formerly: EDCI732.

TLPL663 Practice and Theory in Teaching Second Language Learners (3 Credits)
Focuses on issues that arise while teaching second language (ESOL or foreign language) learners. Supports implementation of theory into practice and research-based best practices during teaching internship, and completion of teaching portfolio during a second field experience.

Corequisite: EDCI637 or EDCI689; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI613 or TLPL663.
Formerly: EDCI613.

TLPL664 Foundations of Second Language Education: Legal, Social and Historical Trends and Issues (3 Credits)
Knowledge of history, research, current practice and public policy issues in the field of second language education from kindergarten to post-secondary settings. Required for TESOL certification program.

Credit Only Granted for: EDCI630 or TLPL664.
Formerly: EDCI630.

TLPL665 Methods of Teaching ESOL (3 Credits)
This course presents a survey of the historical and current approaches, methods, and techniques of teaching English to speakers of other languages, from grammar to translation to audiolingual and communicative approaches. Additionally, successful classroom practices that address the needs of culturally diverse and language minority students will be analyzed.

Credit Only Granted for: EDCI634 or TLPL665.
Formerly: EDCI634.

TLPL666 English Grammar for Teachers of English to Speakers of Other Languages (3 Credits)
English grammar and methods of teaching grammar for graduate, prospective and current teachers of English to speakers of other languages. Analysis of the major grammatical structures of American English. Discussion of the role of teaching grammar, and effective classroom methods and techniques for the English as a second/foreign language classroom.

Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI635 or TLPL666.
Formerly: EDCI635.
TLPL676 Teaching as a Profession (3 Credits)
The profession of teaching and the knowledge base that defines teaching. Current and social issues that affect teaching and learning; role of research and experience in learning to teach.

Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.

Credit Only Granted for: EDCI690 or TLPL676.

Formerly: EDCI690.

TLPL677 Reframing Teacher Professionalism: Achieving Teacher Leadership (3 Credits)
Understanding the profession of teaching, teacher leadership, and the knowledge base that undergirds the teaching profession. Multiple perspectives on teaching in the current debate on school reform and how they are aligned across the political spectrum.

Credit Only Granted for: EDCI682 or TLPL677.

Formerly: EDCI682.

TLPL678 Professional Seminar in Education (1-3 Credits)
Seminar on the issues and problems teacher candidates encounter in classrooms. Exploration of the skills and strategies that best address these challenges.

Prerequisite: Admission to a masters certification program in EDCI.

Corequisite: Participation in an arranged school placement.

Credit Only Granted for: EDCI618 or TLPL678.

Formerly: EDCI618.

TLPL679 Field Experiences in Education (1-3 Credits)
Field experiences in approved educational setting with appropriate supervision. Credit not to be granted for experience accrued prior to registration. Open only to students admitted to approved teacher education programs.

Repeatable to: 3 credits if content differs.

Formerly: EDPS689.

TLPL680 Contemporary Social Issues in Education (3 Credits)
Theoretical and practical consideration of vital social issues currently affecting education.

Credit Only Granted for: TLPL680 or EDPS601.

Formerly: EDPS601.

TLPL681 History of Education in the United States (3 Credits)
A study of the origins and development of education in the United States, emphasizing the variety of interpretive and methodological concerns that define the field.

Credit Only Granted for: TLPL681 or EDPS611.

Formerly: EDPS611.

TLPL682 Philosophy of Education (3 Credits)
A study of the great educational philosophers and systems of thought affecting the development of modern education, with particular emphasis on recent scholarship on philosophical problems in education.

Credit Only Granted for: EDPS612 or TLPL682.

Formerly: EDPS612.

TLPL683 Educational Sociology (3 Credits)
The sociological study of education as an evolving set of methods and procedures, and body of knowledge. Focuses on several major theoretical perspectives used by sociologists studying education.

Credit Only Granted for: TLPL683 or EDPS613.

Formerly: EDPS613.

TLPL683 Embracing Diversity in Classroom Communities (3 Credits)
The course aims to help students understand race, class, gender, and sexuality as systems of privilege, exclusion, marginalization, and the centrality of embracing diversity in the classroom communities to promote the success of all students.

Credit Only Granted for: EDCI697 or TLPL675.

Formerly: EDCI697.

TLPL676 Teaching as a Profession (3 Credits)
The profession of teaching and the knowledge base that defines teaching. Current and social issues that affect teaching and learning; role of research and experience in learning to teach.

Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.

Credit Only Granted for: EDCI690 or TLPL676.

Formerly: EDCI690.

TLPL677 Reframing Teacher Professionalism: Achieving Teacher Leadership (3 Credits)
Understanding the profession of teaching, teacher leadership, and the knowledge base that undergirds the teaching profession. Multiple perspectives on teaching in the current debate on school reform and how they are aligned across the political spectrum.

Credit Only Granted for: EDCI682 or TLPL677.

Formerly: EDCI682.

TLPL678 Professional Seminar in Education (1-3 Credits)
Seminar on the issues and problems teacher candidates encounter in classrooms. Exploration of the skills and strategies that best address these challenges.

Prerequisite: Admission to a masters certification program in EDCI.

Corequisite: Participation in an arranged school placement.

Credit Only Granted for: EDCI618 or TLPL678.

Formerly: EDCI618.

TLPL679 Field Experiences in Education (1-3 Credits)
Field experiences in approved educational setting with appropriate supervision. Credit not to be granted for experience accrued prior to registration. Open only to students admitted to approved teacher education programs.

Repeatable to: 3 credits if content differs.

Formerly: EDPS689.

TLPL680 Contemporary Social Issues in Education (3 Credits)
Theoretical and practical consideration of vital social issues currently affecting education.

Credit Only Granted for: TLPL680 or EDPS601.

Formerly: EDPS601.

TLPL681 History of Education in the United States (3 Credits)
A study of the origins and development of education in the United States, emphasizing the variety of interpretive and methodological concerns that define the field.

Credit Only Granted for: TLPL681 or EDPS611.

Formerly: EDPS611.

TLPL682 Philosophy of Education (3 Credits)
A study of the great educational philosophers and systems of thought affecting the development of modern education, with particular emphasis on recent scholarship on philosophical problems in education.

Credit Only Granted for: EDPS612 or TLPL682.

Formerly: EDPS612.

TLPL683 Educational Sociology (3 Credits)
The sociological study of education as an evolving set of methods and procedures, and body of knowledge. Focuses on several major theoretical perspectives used by sociologists studying education.

Credit Only Granted for: TLPL683 or EDPS613.

Formerly: EDPS613.
TLPL684 Trends in Secondary School Curriculum: Social Studies (3 Credits)
Recent developments in educational thinking and practice on the curriculum in social studies.
Credit Only Granted for: EDCI620 or TLPL684.
Formerly: EDCI620.

TLPL685 Teaching Social Studies in Elementary Schools (3 Credits)
Examination of current literature and research in the social sciences as they relate to social studies curriculum and instruction.
Credit Only Granted for: EDCI622 or TLPL685.
Formerly: EDCI622.

TLPL686 Secondary Social Studies Pedagogy (3 Credits)
The second course in a three-course teaching methods sequence. Addresses two key questions: (1) How do secondary school students think about and learn history/social studies? (2) How can secondary teachers teach history/social studies in ways that promote student learning?
Prerequisite: TLPL470; or EDCI680.
Credit Only Granted for: EDCI627 or TLPL686.
Formerly: EDCI627.

TLPL687 Politics of Education (3 Credits)
Educational institutions as political entities. Focuses on conceptual perspectives for examining political dynamics in governmental and organizational contexts. Provides opportunities to carry out original case studies of policy making processes at various levels of the education policy system.
Credit Only Granted for: EDPS614 or TLPL687.
Formerly: EDPL614.

TLPL688 Special Topics in Education (1-3 Credits)
Special treatment of current topics and issues in teaching, learning, policy and leadership.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Formerly: EDCI688.

TLPL689 Internship in Education (1-12 Credits)
Internship or residency experiences in school settings with appropriate supervision. Credit not to be granted for experience accrued prior to registration. Open only to students admitted to approved teacher education programs.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Repeatable to: 12 credits if content differs.
Credit Only Granted for: EDCI689 or TLPL689.
Formerly: EDCI689.

TLPL690 Introduction to Qualitative Methods in Policy Research (3 Credits)
Introduction to research methods and designs used in studies of education policy, planning, and administration.
Credit Only Granted for: EDPS690 or TLPL690.
Formerly: EDPS690.

TLPL691 Research Methods (3 Credits)
The interpretation and conduct of research relevant to curriculum, teaching and learning.
Credit Only Granted for: EDCI685 or TLPL691.
Formerly: EDCI685.

TLPL692 Statistical Literacy for Education Research (3 Credits)
Students will learn about descriptive (measures of central tendencies and dispersion) and inferential (bivariate and OLS regression) statistics with education applications. Throughout the course, students will learn critical basic statistical concepts, and statistics' language and how to interpret results and communicate research findings, both orally and in written form. Students will also explore various statistical techniques and read research articles to better understand statistical procedures and approaches.
Credit Only Granted for: TLPL788C, EDPS788I or TLPL692.
Formerly: TLPL788C.

TLPL693 Principles of Curriculum Development (3 Credits)
Curriculum planning, improvement, and evaluation in the schools; principles for the selection and organization of the content and learning experiences; ways of working in classroom and school on curriculum improvement.
Credit Only Granted for: EDPS635 or TLPL693.
Formerly: EDPS635.

TLPL694 Embracing Diversity: Critical Foundations of Schooling and Education (3 Credits)
Introduces teacher candidates to critical, sociocultural foundations of U.S. schooling, education, and society. Teacher candidates interrogate what it means to be an anti-racist, social justice-oriented educator in a pluralistic classroom.

TLPL695 Methods I: K-12 World Language Methods and Technology (3 Credits)
TLPL 695 requires on-going examination of theories relevant to language acquisition. Students will also investigate the instructional methods that reflect those theories.
Credit Only Granted for: EDCI410, TLPL445, EDCI688K, or TLPL695.
Formerly: EDCI688K.

Additional Information: Lab and field experiences required.

TLPL696 Advanced K-12 World Language Methods and Technology (3 Credits)
Teaches advanced best practices for effective World Language instruction. Topics include: lesson planning, using authentic assessment and materials, applying national and state standards infusing culture, interdisciplinary content and technology. Classroom management procedures and strategies to create a welcoming and engaging classroom environment. Motivating students and differentiated instruction.
Prerequisite: TLPL695; and TLPL695.
Precorequisite: Must be concurrently enrolled in TLPL479J.
Credit Only Granted for: EDCI433, EDCI688A, TLPL450 or TLPL696.
Formerly: EDCI688A.

TLPL698 Conducting Research on Teaching (1-3 Credits)
Analysis and improvement of educational practice. Research methods used in the study of classroom teaching. Design and conduct of an action research project. Open only to students admitted to approved teacher education programs.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Repeatable to: 3 credits if content differs.
Formerly: EDCI698.

TLPL699 Master's Seminar (3 Credits)
Directed study for master's degree students writing seminar papers.
Credit Only Granted for: EDPS679 or TLPL699.
Formerly: EDPS679.
TLPL700 Theory and Research in Computer Education (3 Credits)
Examination of the current research and theory in the instructional uses of computers, instructional tutoring systems, computer programming environments, computer-based laboratories and problem solving environments in educational settings.
Prerequisite: TLPL600, EDMS645, and TLPL691; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI783 or TLPL700.
Formerly: EDCI783.

TLPL701 Computers in Science Education (3 Credits)
Current and projected methods by which computers can augment classroom and laboratory-based science instruction in school and non-school settings.
Prerequisite: Must have completed EDCI487; or students who have taken courses with comparable content may contact the department.
Credit Only Granted for: EDCI677 or TLPL701.
Formerly: EDCI677.

TLPL702 Theories of Learning and Leadership with Technology (3 Credits)
Exploration of the impact technology has on how people learn, and how people use technology effectively to facilitate learning. Discussion of theories of designing technology for effective teaching and learning, and examinations of the challenges of implementing technology in education systems.
Credit Only Granted for: EDCI788Q or TLPL702.
Formerly: EDCI788Q.
Additional Information: Priority will be given to students in the Technology Learning and Leadership specialization.

TLPL703 Research on Technology in Education (3 Credits)
Students explore the research methodologies used by those doing research with and on learning technologies, focusing on cultural, experimental, design and learning analytic approaches. Emphasis will be on asking meaningful research questions related to technology and exploring methodological and analytical approaches for answering them. This course will also explore research methods that examine the efficacy of new technologies, research about technology, design methods.
Credit Only Granted for: EDCI788Q or TLPL703.
Formerly: EDCI788Q.
Additional Information: Priority will be given to students in the Technology Learning and Leadership specialization.

TLPL708 Special Topics in Technology, Learning & Leadership (1-3 Credits)
Read, plan, conduct, and report on research projects and research topics related to Technology, Learning & Leadership. Projects may be faculty/student projects, or group or individual student projects (may or may not be related to a dissertation). Emphasis on framing researchable questions and designing/analyzing research studies. Faculty and peer feedback and interaction are crucial expectations.
Repeatable to: 9 credits if content differs.
Credit Only Granted for: EDCI758, TLPL728 or TLPL708.
Formerly: EDCI758, TLPL728.

TLPL710 Theory and Research on Mathematical and Scientific Thinking and Learning (3 Credits)
Study of mathematical and scientific thinking by students at various levels of schooling considered from the perspective of those classic and contemporary theories of learning that are particularly relevant to the study of mathematics and science. Exploration of what it means to understand mathematics and science.
Prerequisite: Admitted to Doctoral Program in Mathematics Education or Science Education; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI751 or TLPL710.
Formerly: EDCI751.

TLPL711 Foundations of Mathematics Education II: Theory and Research on Mathematics Teaching (3 Credits)
Knowledge of and insights into how mathematics has been and is being taught; theories about how it might be taught. Familiarity with the methods used to do research on teaching and to improve teaching.
Prerequisite: TLPL710; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI752 or TLPL711.
Formerly: EDCI752.

TLPL712 Foundations of Mathematics Education III: Curriculum (3 Credits)
The study of curriculum in mathematics and research on curriculum. The relationship of mathematics and school mathematics; the forms, purposes, development, and evaluation of mathematics curricula.
Prerequisite: Admitted to Mathematics Education Doctoral Program; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI753 or TLPL712.
Formerly: EDCI753.

TLPL713 Mathematics and Science Education Policy, Professional Development and Teacher Preparation (3 Credits)
Preservice teacher education, professional development, and policy as agents of reform in mathematics education and in science education.
Prerequisite: Admitted to Doctoral Program in Mathematics Education or Science Education; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI754 or TLPL713.
Formerly: EDCI754.

TLPL720 Foundations of Science Education (3 Credits)
Development of science education pre-kindergarten through college; the influences on current and future practices; and the identification and critical analysis of topics in science education.
Prerequisite: TLPL620 or TLPL625; or permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDCI770 or TLPL720.
Formerly: EDCI770.
TLPL710 or TLPL713.

Repeatable to: 6 credits if content differs.

Formerly: EDCI769.

EDCI761.

EDPS732 or TLPL761.

Formerly: EDCI764.

TLPL740 Language and Education (3 Credits)
Dialect, language varieties in school settings; historical and current perspectives on the role of language in learning; theories of school achievement and consequences for language assessment.

Credit Only Granted for: EDCI730 or TLPL740.

Formerly: EDCI730.

TLPL743 Teaching English Language Learners: Current and Future Research Directions (3 Credits)
Research on the preparation of generalists and specialists teaching English Language Learners. Current research and future research directions.

Prerequisite: TLPL771 or TLPL662; or permission of EDUC-Teaching and Learning, Policy and Leadership department.

Credit Only Granted for: EDCI734 or TLPL743.

Formerly: EDCI734.

TLPL744 Research Foundations of Second Language Education: Examining Linguistically Diverse Student Learning (3 Credits)
Critically examine theories of second language acquisition and research in applied linguistics relevant to linguistically diverse students and learners of English as an additional language. Analysis of research from linguistic, psycholinguistic, sociolinguistic and sociocultural perspectives, with an emphasis on the social contexts of second language learning and teaching.

Prerequisite: TLPL664 or TLPL662; and permission of EDUC-Teaching and Learning, Policy and Leadership department. Or permission of instructor.

Credit Only Granted for: EDCI735 or TLPL744.

Formerly: EDCI735.

TLPL745 Classroom Inquiry Toward Teacher Professional Development (2 Credits)
Emphasizes current research and best practice on teacher inquiry as a mode of professional development. Participants will work within a teacher-coaching model to create a professional development presentation on writing and classroom writing instruction.

Credit Only Granted for: EDCI735 or TLPL760.

Formerly: EDCI735.

TLPL760 College Teaching (3 Credits)
Critical review of literature on teaching in higher education from conceptual and practical viewpoints. Designed for current and prospective adult educators. Focused on research and improvement of instruction.

Credit Only Granted for: EDCI735 or TLPL760.

Formerly: EDCI735.

TLPL761 History of Curriculum Theory and Development (3 Credits)
The writings of major educators in curriculum. Conceptual and formal similarities and differences between current curriculum projects and historical antecedents. Survey of curriculum materials for classroom use in their relationship to the curriculum theory of their time.

Prerequisite: TLPL693.

Restriction: Permission of EDUC-Education Policy and Leadership department.

Credit Only Granted for: EDCI735 or TLPL761.

Formerly: EDCI735.

TLPL762 Phenomenological Inquiry I (3 Credits)
Philosophic grounding for phenomenological inquiry at a beginning level. Guided writing practice in doing phenomenological inquiry is provided on a selected lived experience phenomenon.

Credit Only Granted for: EDCI735 or TLPL762.

Formerly: EDCI735.
TLPL763 Phenomenological Inquiry II (3 Credits)
This advanced course in phenomenological methodology provides an expanded philosophic and methodological grounding for conducting phenomenological research. Attention is given to the development of phenomenological projects through the process of phenomenological writing. It is especially relevant for persons interested in the study of lived meanings in the domains of education, psychology, counseling, the health sciences and related academic and professional fields.
Prerequisite: TLPL762.
Credit Only Granted for: EDPS736 or TLPL763.
Formerly: EDPS736.

TLPL765 Quantitative Applications for Education Policy Analysis (3 Credits)
Students use quantitative applications and secondary datasets to investigate social problems and education policies. Emphasis on the use of quasi-experimental designs and regression techniques to frame education issues, analyze, and recommend policies.
Prerequisite: EDM6645; or students who have taken courses with comparable content may contact the department.
Recommended: EDM6646; or EDM6651. Or EDM6646; and EDM6651.
Credit Only Granted for: EDPS703 or TLPL765.
Formerly: EDM6645.

TLPL766 Impact Evaluation for Education and Public Policy (3 Credits)
Students will learn about and practice using a variety of quantitative research methods that allow for causal inferences and can be applied to estimate the impact of policies or programs in education and other policy sectors.
Prerequisite: Knowledge of multivariate regression and prior experience with statistical programming software (e.g., Stata). TLPL765 or permission from instructor.
Credit Only Granted for: TLPL766, TLPL767, or EDPS621.
Formerly: TLPL767.

TLPL767 Law, Equity, and Diversity in Education (3 Credits)
An examination of 'dilemmas of difference' on selected issues that arise at the intersection of law and education policy. Dilemmas and value conflicts imbedded in modern federal and state case law dealing with race, gender, sexual orientation, religion and disability.
Credit Only Granted for: TLPL767 or EDPS751.
Formerly: EDM651.

TLPL770 Black and Latino Education: History and Policy (3 Credits)
Examination of the historical legacies and contemporary policies that have contributed to the educational status (K-20) of Blacks and Latinos in the United States from the 19th century to the present. Issues surrounding language, immigration, racism, social class, and state and federal policies will also be analyzed.
Recommended: EDPS765; and completion of EDPS611 recommended.
Credit Only Granted for: EDPS786 or TLPL770.
Formerly: EDIC786.

TLPL771 Theory and Research on Teaching (3 Credits)
Analysis of the interactive process of instruction; preschool through higher education in school and non-school settings; future directions and needed research.
Credit Only Granted for: EDIC780 or TLPL771.
Formerly: EDIC780.

TLPL772 Teaching, Professional Development and School Change (3 Credits)
Examines current scholarship on professional development for K-12 teachers, characteristics of good professional development, and its relationship to teaching, learning, and school improvement.
Credit Only Granted for: EDIC784 or TLPL772.
Formerly: EDIC784.

TLPL773 Theory and Research in Social Studies Education (3 Credits)
A survey of the research literature; evaluation of research techniques; consideration of relevant instructional curriculum theory; evaluation of modern teaching methods and techniques.
Prerequisite: TLPL684; or TLPL685.
Credit Only Granted for: EDIC720 or TLPL773.
Formerly: EDIC720.

TLPL774 Urban Education (3 Credits)
This seminar provides students with a broad overview of urban education as a field of inquiry by examining the social context of urban schools, how transformative pedagogy is practiced and conceptualized as well as school reform.
Credit Only Granted for: EDIC776 or TLPL774.
Formerly: EDIC776.

TLPL775 Power, Privilege, Diversity and Teaching (3 Credits)
This course critically examines the theoretic foundation of multicultural education with particular emphasis on the relationship between power, privilege, diversity and teaching.
Credit Only Granted for: EDIC782 or TLPL775.
Formerly: EDIC782.

TLPL777 Scholarly Thought and Contemporary Curriculum (1-3 Credits)
Current curricular trends, issues, theory, and research in the light of past curricular and social thought.
Restriction: Permission of EDUC-Human Development and Quantitative Methodology department.
Repeatable to: 6 credits.
Formerly: EDPS738.

TLPL786 School Finance and Business Administration (3 Credits)
Introduction to principles and practices in the administration of the public school finance activity. Sources of tax revenue, the budget, and the function of finance in the educational program are considered.
Credit Only Granted for: EDPS676 or TLPL786.
Formerly: EDPS676.

TLPL788 Special Topics in Education (1-3 Credits)
Special and intensive treatment of current topics and issues in teaching, learning, policy and leadership.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Repeatable to: 6 credits.

TLPL789 Internship in Education (1-3 Credits)
Approved professional experiences with appropriate supervision. Open only to students admitted to approved master's and doctoral specializations.
Repeatable to: 3 credits if content differs.
Credit Only Granted for: EDPS789 or TLPL789.
Formerly: EDPS789.
TLPL790 Seminar in Mixed Methods Research in Education (3 Credits)
Examination of epistemological and methodological issues involved in conducting mixed methods studies in education. Students design and conduct analyses using existing datasets that include qualitative and quantitative data. They formulate appropriate research questions, consider alternative mixed methods designs, and address methodological complexities associated with working with qualitative and quantitative data in a single study.
Prerequisite: EDMS646; and (EDCI791 or EDHI700); and permission of EDUC-Teaching and Learning, Policy and Leadership department.
Recommended: EDCI792.
Credit Only Granted for: EDCI775 or TLPL790.
Formerly: EDCI791.

TLPL791 Qualitative Research I: Design and Fieldwork (3 Credits)
Examines the theoretical and epistemological moorings of different types of qualitative research. Students apply selected field research methods to problems of professional practice in schools and communities while considering central issues and dilemmas that arise while engaging in fieldwork.
Prerequisite: EDCI790.
Credit Only Granted for: EDCI791 or TLPL791.
Formerly: EDCI791.

TLPL792 Qualitative Research II: Analysis and Interpretation of Data (3 Credits)
Considers methods of on-going data analysis, ways of knowing and writing about field research, issues of reflexivity, and the ethical and political decisions involved in crafting text. Students read literature on and exemplars of multiple modes of qualitative data analysis and interpretation.
Prerequisite: TLPL791.
Credit Only Granted for: TLPL792 or EDCI792.
Formerly: EDCI792.

TLPL793 Methods of Discourse Analysis (3 Credits)
Surveys the various theoretical and methodological frameworks for doing discourse analytic investigations across disciplines.
Credit Only Granted for: EDCI788B or TLPL793.
Formerly: EDCI788B.

TLPL794 Foundations of Educational Research I (3 Credits)
An introduction to the "contested terrain" of education research. It examines major conceptual, methodological and political issues embedded in efforts to carry out education research and focuses on the development of the analytic dispositions and communication skills required to carry out research that meets the variously defined quality, utility and significance standards of scholarship in the field.
Restriction: Must be in Teaching and Learning, Policy and Leadership (Doctoral) program.
Credit Only Granted for: EDPS788P or TLPL794.
Formerly: EDPS788P.

TLPL795 Foundations of Educational Research II (3 Credits)
Students engage in the process of conceptualizing and completing a rigorous review of a section of literature in their area of specialization.
Restriction: Must be in Teaching and Learning, Policy and Leadership (Doctoral) program.
Credit Only Granted for: EDPS788T or TLPL795.
Formerly: EDPS788T.

TLPL798 Special Problems in Education (1-6 Credits)
Exploration of current problems in teaching, learning, policy and leadership. Available only to master’s or doctoral candidates under the direction of their advisors.
Formerly: EDPL798.

TLPL799 Master's Thesis Research (1-6 Credits)
Formerly: EDPS799.

TLPL820 Seminar in Science Education (3 Credits)
Credit Only Granted for: EDCI870 or TLPL820.
Formerly: EDCI870.

TLPL828 Seminar in Mathematics Education (1-3 Credits)
Survey and analysis of literature on an identified research topic in mathematics education. Design and implementation of a research study to investigate the identified topic.
Repeatable to: 6 credits.
Credit Only Granted for: EDCI858 or TLPL828.
Formerly: EDCI858.

TLPL830 Seminar in English Education (3 Credits)
Credit Only Granted for: EDCI840 or TLPL830.
Formerly: EDCI840.

TLPL840 Seminar in Reading Education (3 Credits)
Credit Only Granted for: EDCI860 or TLPL840.
Formerly: EDCI860.

TLPL841 Research Methods in Reading (3 Credits)
Current research questions and methods culminating in a study suitable for submission to journals. Emphasis on using and conducting research.
Credit Only Granted for: EDCI861 or TLPL841.
Formerly: EDCI861.

TLPL860 Seminar on Case Study Methods (3 Credits)
Conceived as both an analysis of case study methods and a laboratory for applying course content to research topics or projects of interest to students, it addresses a range of conceptual, methodological, ethical, political, and logistical issues embedded in efforts to conduct thoughtful, "disciplined" case study research. Since this focuses on case study research, it may be particularly helpful to students who are exploring various approaches to research or who are contemplating using case study methods in their theses and/or dissertations.
Prerequisite: TLPL690; or students who have taken courses with comparable content may contact the department.
Credit Only Granted for: EDPS730 or TLPL860.
Formerly: EDPS730.

TLPL861 Seminar in Social Studies Education (3 Credits)
Credit Only Granted for: EDCI820 or TLPL861.
Formerly: EDCI820.

TLPL862 Race, Class, and Social Justice: A Policy Seminar in Curriculum Theory and Development (3 Credits)
An advanced seminar focusing upon critical analyses of the themes, concepts, and language relevant to Curriculum Theory, Policy, and Research. Focus on education policy issues relating to race, class, and social justice with special reference to patterns of economic and cultural distribution, their impact upon persons at society’s margins and on specific curricular responses to injustice.
Prerequisite: TLPL693.
Restriction: Permission of EDUC-Teaching and Learning, Policy and Leadership department.
Credit Only Granted for: EDPS837 or TLPL862.
Formerly: EDPS837.
TLPL888 Apprenticeship in Education (1-8 Credits)
Apprentice practice under professional supervision in an area of
competence compatible with the student's professional goals. Credit not
to be granted for experience accrued prior to registration. Open only to
degree- and certificate-seeking graduate students.
Restriction: Permission of EDUC-Teaching and Learning, Policy and
Leadership department.
Credit Only Granted for: EDPS888 or TLPL888.
Formerly: EDPS888.

TLPL889 Internship in Education (3-8 Credits)
Internship experiences at a professional level of competence in a
particular role with appropriate supervision. Credit not to be granted for
experience accrued prior to registration. Open only to students advanced
to candidacy for doctoral degree.
Restriction: Permission of EDUC-Teaching and Learning, Policy and
Leadership department.
Credit Only Granted for: EDPS889 or TLPL889.
Formerly: EDPS889.

TLPL898 Pre-Candidacy Research (1-8 Credits)
Credit Only Granted for: EDPS898 or TLPL898.
Formerly: EDPS898.

TLPL899 Doctoral Dissertation Research (1-8 Credits)
Registration required to the extent of 6-9 hours for an Ed.D. Project and
12-18 hours for a Ph.D. Dissertation.
Formerly: EDPS899.