TEACHER EDUCATION (TED)

TED 198 Freshman Teaching Fellows Seminar I 1
This course is designed to assist first-year Teaching Fellows into the academic and social systems of higher education and provide an introduction to the field of public school education.
Prerequisites: North Carolina Teaching Fellow.

TED 199 Freshman Teaching Fellows Seminar II 1
This course is designed to assist first-year Teaching Fellows into the academic and social systems of higher education and provide an introduction to the field of public school education.
Prerequisites: North Carolina Teaching Fellow.

TED 222 Mathematics for Teaching 3
Focuses on the mathematical understanding needed for elementary grades mathematics instruction as related to K-5 learners. Content emphases include number and operations, algebra, and data analysis and probability.
Prerequisites: TED 222. MDED major.

TED 223 Mathematics for Teaching Middle Grades 3
This course explores the mathematical content of middle school mathematics: numbers and operations, algebra, measurement, statistics, probability, and geometry. It is structured to build students’ conceptual understanding of mathematics.
Prerequisites: TED 222. MDED major.

TED 224 English Language Arts Concepts for Middle Grades Teachers 3
The course addresses foundational concepts in middle school English language arts, including the cultural and historical contexts of adolescent literature; genre, form, and literary analysis; writing processes; and grammar essentials.
Prerequisites: MDED major. Admission to the Teacher Education Program.

TED 250 Teaching as a Profession 3
A study of traditional and contemporary perspectives on teaching and learning; analysis of contemporary educational issues from teachers’ perspectives; exploration of personal needs and goals in relation to teaching. Field experience in schools required.

TED 275 Professional Development Schools 9
Placeholder course for Elementary and Middle Grades Education students (undergraduates) who apply for admission to the Teacher Education major in the spring and early summer.

TED 296 Study Abroad for Global Engagement: Field Experience 1
Second of three courses taken in conjunction with a UNCG Study Abroad Exchange. Online individual study focusing on the field experience and appropriate engagement in international, intercultural, and/or multicultural contexts.
Prerequisites: IGS 295. Acceptance to a UNCG Study Abroad Exchange Program;
Notes: May repeated up to three times (for three different exchange experiences) for credit when topic varies for a total of 3 s.h.; however, may apply only once toward Special Programs in Liberal Studies: IGS major concentration requirements; Grade: Pass/Not Pass (P/NP); Same as IGS 296, SES 296.

TED 297 Study Abroad for Global Engagement: Re-Entry Reflections and Applications 1
Third of three courses taken in conjunction with a UNCG Study Abroad Exchange. Focus on the re-entry and re-acculturation processes and the integration of intercultural development into future contexts.
Prerequisites: IGS 296. Acceptance to a UNCG Study Abroad Exchange Program;
Notes: May repeated up to three times (for three different exchange experiences) for credit when topic varies for a total of 3 s.h.; however, may apply only once toward Special Programs in Liberal Studies: IGS major concentration requirements; Grade: Pass/Not Pass (P/NP); Same as IGS 297, SES 297.

TED 298 Sophomore Teaching Fellows Seminar I 1
This course is designed to assist sophomore Teaching Fellows in exploring their beliefs about teaching with emphasis on cultural, legal, and ethical dimensions of teaching in schools.
Prerequisites: North Carolina Teaching Fellow.

TED 299 Sophomore Teaching Fellows Seminar II 1
This course is designed to assist sophomore Teaching Fellows in exploring their beliefs about teaching with emphasis on cultural, legal, and ethical dimensions of teaching in schools.
Prerequisites: North Carolina Teaching Fellow.

TED 300X Experimental Course 1-6
This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

TED 320 Language Arts Education 3
Curriculum and teaching strategies in the Language Arts with emphasis on the interrelatedness of all language processes: reading, writing, listening, and speaking.
Prerequisites: ELED or ELSP major.

TED 335 Language Foundations for Teachers 3
Introductory study of the components of English phonology, morphology, semantics, syntax, and sociolinguistics with a special emphasis on the K-12 classroom application of this knowledge.

TED 350 Internship I: Inquiry in Teaching and Learning 3
Supervised in-school internship and on-campus seminar focused on applying research-based principles from educational psychology and classroom management to teaching and learning.
Prerequisites: ELED, MD, or SPEL major.

TED 360 Integrating the Social Studies in Elementary Grades 3
An examination of curriculum, instruction, and learning in K-6 social studies education. Emphases include development of the social studies; curricular principles and components; teaching strategies; and learner outcomes.
Prerequisites: ELED or ELSP major.

TED 370 Science Education in the Elementary School 3
Curriculum and teaching techniques in science for undergraduate prospective elementary school teachers (K-6) with emphasis on problem solving and critical thinking abilities.
Prerequisites: ELED or ELSP major.

TED 375 Internship II: Inquiry in Teaching and Learning 3
Supervised in-school internship and on-campus seminar focused on applying research-based principles from educational psychology and classroom management to teaching and learning.
Prerequisites: ELED major.
TED 380 Mathematics Education 3
Provides for the development of knowledge and skills necessary to prepare students to teach mathematics in elementary/middle school classrooms.
Prerequisites: ELED, ELSP, or MDED major.

TED 398 Junior Teaching Fellows Seminar I 1
This course is designed to assist junior Teaching Fellows in exploring the community aspects of teaching to diversity.
Prerequisites: North Carolina Teaching Fellow.

TED 399 Junior Teaching Fellows Seminar II 1
This course is designed to assist junior Teaching Fellows in exploring the community aspects of teaching to diversity.
Prerequisites: North Carolina Teaching Fellow.

TED 400 Internship III: Inquiry in Teaching and Learning 3
Supervised in-school internship and on-campus seminar focused on multicultural education teaching to diversity, and understanding the classroom as culture.
Prerequisites: ELED or SPEL major.

TED 40X Experimental Course 1-6
This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

TED 401 Child and Adolescent Development and Learning 1
Definitions and content of theories of development and learning. Enrollment is limited to students who are pursuing initial teacher licensure.
Prerequisites: Admission to the Teacher Education Program.

TED 402 Student Engagement in the Classroom 1
Environmental and interpersonal factors in effective classroom management. Enrollment is limited to students who are pursuing initial teacher licensure.
Prerequisites: Admission to the Teacher Education Program.

TED 403 Teaching English Learners with Diverse Abilities 1
Cultural, legal, and pedagogical understandings related to teaching English learners with diverse abilities in general education classrooms. Enrollment is limited to students pursuing initial teacher licensure.
Prerequisites: Admission to the Teacher Education Program.

TED 406 Institutes in Education 1-3
Practicum or workshop experiences to focus on issues, problems, or approaches in the profession.

TED 416 Emergent Literacy and Literature 3
Explores emergent literacy development from birth to age 5 and investigates the role that texts play in young children's development.

TED 420 Reading Education 3
Curriculum and teaching strategies with emphasis on reading/writing connections, corrective reading, and differentiated instruction.
Prerequisites: Admission to Elementary Education or dual major in Elementary and Special Education.

TED 421 Reading Education in the Middle Grades 3
This course examines who middle grades struggling readers are, what challenges content learning may present them, and how content area teachers can address the diverse literacy needs of students.
Prerequisites: MDED major.

TED 423 Legal, Historical, and Cultural Issues in ESL 3
Exploration of legal and historical bases of English as a Second Language. Analysis of differences among home and school cultures, especially related to language.
Prerequisites: Standard Professional I License in another area or permission of instructor.

TED 425 Dual Language Instructional Practice 3
This course focuses on teaching in a dual language classroom setting including instructional methods as well as a theoretical framework that supports bilingualism and biliteracy practices.
Prerequisites: Permission of instructor.

TED 428 Advanced Methods in the Elementary Grades 3
Advanced study of methods for teaching, integrating, differentiating, and assessing a specific discipline in the elementary education curriculum. Content area will coincide with team focus.
Prerequisites: Satisfactory standing in Elementary Teacher Education or dual major in Elementary and Special Education.

TED 430 Middle Grades Language Arts 3
Course develops competencies in middle grades language arts instruction as related to adolescent learners. Emphases include practical and theoretical attention to best-practices, curriculum, assessment, and standards of practice.
Prerequisites: MDED major.

TED 435 Literacy in the Content Area 3
Designed to prepare middle grades, secondary, and special subject or content area teachers to work with students who exhibit a variety of reading and writing levels.
Prerequisites: Admission to the Teacher Education Program or M.Ed. Program.

TED 442 Teaching and Learning in the Middle Grades 3
Students will explore the developmental needs of early adolescents, analyze educational practices designed to meet those needs and investigate issues identified in internship experiences.
Prerequisites: TED 250.

TED 444 Educational Psychology for the Secondary Grades 3
The application of the principles of educational psychology (i.e., adolescent development, diversity, learning theory, motivation, and assessment) to teaching high school students.

TED 445 Human Diversity, Teaching, and Learning 3
Examines how the multiple identities of race, ethnicity, socioeconomic status, gender, and religion affect the teaching and learning environment. Issues of classroom management for maximum instructional delivery are also included.

TED 450 Psychological Foundations of Education 3
Designed to develop and demonstrate application of knowledge and understanding of the processes and methods of learning and teaching in respective school settings. Includes study of learner's growth and maturation, individual differences, and application of psychology to task of the teacher in evaluating pupil progress. Classroom observation and simulated experiences emphasized. Appropriate emphasis on adolescent.

TED 451 Teaching Practices and Curriculum in English 3
Designed to acquaint prospective teachers with modern concepts and practices of English instruction in secondary schools; emphasis on teaching four fundamental language arts: speaking, writing, reading, and listening.
Prerequisites: TED 445, admission to the Teacher Education Program, and an overall minimum GPA of 2.75. or permission of instructor.
Notes: Required of student teachers in English.
TED 452 Educational Psychology for the Middle Grades 3
The application of the principles of educational psychology (i.e., adolescent development, diversity, learning theory, motivation, and assessment) to teaching middle school students.
Prerequisites: MDED major.

TED 453 Teaching Practices and Curriculum in Social Studies 3
Organization of social studies in secondary schools; classroom methods, techniques, and activities; teaching materials, and testing and evaluation.
Prerequisites: TED 445, admission to the Teacher Education Program, and an overall minimum GPA of 3.0, or permission of instructor.
Notes: Required of student teachers in social studies.

TED 454 Middle Grades Social Studies Education 3
Examination of candidate competencies in middle grades social studies instruction. Emphases include practical and theoretical attention to curriculum development, planning, resources, standards, instructional strategies, and assessment.
Prerequisites: MDED major.

TED 458 Middle Grades Mathematics Education 3
Development of middle grades mathematics instruction as related to adolescent learners. Emphases include practical and theoretical attention to best practices, curriculum, assessment, and standards of practice.
Prerequisites: MDED major; CPT student; lateral-entry middle grades mathematics teacher status (without having completed a middle-grades mathematics methods course); or permission of instructor.
Corequisites: MDED major or CPT student: TED 375 or equivalent.
Notes: CPT (classroom practice track) students have a bachelor's degree in a discipline other than education and want to pursue an education degree.

TED 459 Teaching Practices and Curriculum in Science 3
Development of philosophy of science teaching and of attitudes and values relative to science teaching in secondary school. Emphasis on recent curriculum studies in biology, chemistry, physics, and earth-science and the changing approaches to teaching these subjects.
Prerequisites: TED 445 and admission to the Teacher Education Program, or permission of instructor.
Notes: Required of student teachers in science.

TED 460 Middle Grades Science Education 3
Develops candidate competencies in middle grades science instruction as related to adolescent learners. Emphases include practical and theoretical attention to best practices, curriculum, assessment, and standards of practice.
Prerequisites: MDED major.

TED 461 Student Teaching: Elementary Grades 9
Supervised student teaching in an elementary setting (grades K–6) under direction of a cooperating teacher with university supervision. Full-time teaching assignment in cooperating schools for a full semester.
Prerequisites: Admission to the Teacher Education Program.
Notes: Grade: Pass/Not Pass (P/NP).

TED 462 Student Teaching: Middle Grades 9
Supervised student teaching in a middle grades setting (grades 6–9) under direction of a cooperating teacher with University supervision. Full-time teaching assignment in cooperating schools for a full semester.

TED 463 Nature of Science, Technology, and Society 3
Study of nature of science, encompassing literature from history, philosophy, and sociology of science. Applications of this literature on school science instruction.
Prerequisites: TED 459 or equivalent science methods course.
Notes: May be repeated for credit when topic varies.

TED 465 Student Teaching: Secondary School 9
Supervised student teaching in senior high school under direction of university supervisor. Observation, participation, and appropriate classroom teaching experience on a full-time teaching assignment for full semester with weekly seminar.
Prerequisites: Admission to Student Teaching.

TED 466 Student Teaching Seminar 3
The Student Teaching Seminar course is designed to accompany the student teaching experience. A primary focus of the Seminar will be to prepare students to complete all state licensure requirements (e.g., edTPA). A secondary focus will be to serve as a space to debrief about the student teaching experience as well as to prepare students for the educational job market.

TED 480 Education in Global Settings 6
The course is designed for students who are interested in exploring education issues through guided study-abroad experiences. Students will participate in field experiences and interact with students and teachers abroad.
Notes: May be repeated for a cumulative total of 6 s.h.

TED 490 Community Literacies and Adult Learners 3
This course focuses on working with adult learners, including families of K–12 English learners, who are learning English as an additional language, in both formal and informal settings.

TED 491 Independent Study 1-3
Guided readings, research, or individual project work under direction of a staff member.
Prerequisites: Permission of instructor.

TED 494 Decolonizing Approaches to Education and Research 3-6
Students learn approaches to decolonizing research and education through readings and in partnership with local community members.
Notes: May be repeated for credit when topic varies.

TED 498 Senior Teaching Fellows Seminar I 1
This course is designed to assist senior Teaching Fellows in synthesizing learnings from prior Teaching Fellows seminars and preparing for positions in public schools.
Prerequisites: North Carolina Teaching Fellow.

TED 499 Senior Teaching Fellows Seminar II 1
This course is designed to assist senior Teaching Fellows in synthesizing learnings from prior Teaching Fellows seminars and preparing for positions in public schools.
Prerequisites: North Carolina Teaching Fellow.

TED 506 Institutes in Education 1-3
Practicum or workshop experiences to focus on issues, problems, or approaches in the profession.
Notes: Grade: Satisfactory/Unsatisfactory (S/U). Students may apply no more than three (3) s.h. of this course to any degree program.

TED 516 Emergent Literacy and Literature 3
Explores emergent literacy development from birth to age 5 and investigates the role that texts play in young children's development.
TED 518 Mathematics in the Elementary Schools 3
Current mathematics program, including emphasis on meaning theory and on instructional materials, methods, and procedures in teaching fundamental operations.

TED 519 Science in the Elementary School 3
Designing and developing science learning experiences for children in the biological, physical, earth, and space sciences. The nature of elementary school science and children's interests are considered.

TED 520 Social Studies in the Elementary School 3
Designed to help educators gain more complete understanding of elementary school social studies. Special emphasis given to evaluation of the field beginning with the separate subjects approach to correlation, to broad fields, to integration, and separate disciplines approach. Emphasis also given to identification of key skills that help children function intelligently in this field. Development of democratic citizens also a major consideration.

TED 523 Legal, Historical, and Cultural Issues in ESL 3
Exploration of legal and historical bases of English as a Second Language. Analysis of differences among home and school cultures, especially related to language.
Prerequisites: Standard Professional I License in another area or permission of instructor.

TED 525 Dual Language Instructional Practice 3
This course focuses on teaching in a dual language classroom setting including instructional methods as well as a theoretical framework that supports bilingualism and biliteracy practices.
Prerequisites: Permission of instructor.

TED 530 Middle Grades Language Arts 3
Course develops competencies in middle grades language arts instruction as related to adolescent learners. Emphasizes include practical and theoretical attention to best-practices, curriculum, assessment, and standards of practice.
Prerequisites: MDED major.

TED 535 Literacy in the Content Area 3
Designed to prepare middle grades, secondary, and special subject or content area teachers to work with students who exhibit a variety of reading and writing levels.
Prerequisites: Admission to the Teacher Education or M.Ed. Program.

TED 545 Human Diversity, Teaching, and Learning 3
Examines how the multiple identities of race, ethnicity, socioeconomic status, gender, and religion affect the teaching and learning environment. Issues of classroom management for maximum instructional delivery are also included.
Prerequisites: Admission to the Teacher Education Program or permission of department.

TED 551 Teaching Practices and Curriculum in English 3
Designed to acquaint prospective teachers with modern concepts and practices of English instruction in secondary schools; emphasis on teaching four fundamental language arts: speaking, writing, reading, and listening.
Prerequisites: TED 445, admission to the Teacher Education Program, and an overall minimum GPA of 2.75. or permission of instructor;
Notes: Required of student teachers in English.

TED 553 Teaching Practices and Curriculum in Social Studies 3
Organization of social studies in secondary schools; classroom methods, techniques, and activities; teaching materials; and testing and evaluation.
Prerequisites: TED 445, admission to the Teacher Education Program, and an overall minimum GPA of 3.0. or permission of instructor;
Notes: Required of student teachers in social studies.

TED 554 Middle Grades Social Studies Education 3
Examination of candidate competencies in middle grades social studies instruction. Emphases include practical and theoretical attention to curriculum development, planning, resources, standards, instructional strategies, and assessment.
Prerequisites: MDED major.

TED 558 Middle Grades Mathematics Education 3
Development of middle grades mathematics instruction as related to adolescent learners. Emphasizes include practical and theoretical attention to best practices, curriculum, assessment, and standards of practice.
Prerequisites: TED 545 and admission to the Teacher Education Program. or permission of instructor;
Notes: Required of student teachers in science.

TED 560 Middle Grades Science Education 3
Develops candidate competencies in middle grades science instruction as related to adolescent learners. Emphasizes include practical and theoretical attention to best practices, curriculum, assessment, and standards of practice.
Prerequisites: MDED major.

TED 561 Human Diversity in Global Settings 6
The course is designed for students who are interested in exploring education issues through guided study-abroad experiences. Students will participate in field experiences and interact with students and teachers abroad.
Notes: May be repeated for a cumulative total of 6 s.h.

TED 590 Community Literacies and Adult Learners 3
This course focuses on working with adult learners, including families of K–12 English learners, who are learning English as an additional language, in both formal and informal settings.

TED 600X Experimental Course 1-6
This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

TED 603 Literacy Instruction for English Language Learners 3
Basic knowledge of theory and research in second language acquisition and literacy development and strategies and techniques for effective literacy instruction for English language learners.
TED 604 Applied Linguistics for ESL Teachers 3
Linguistics theories on phonology, morphology, syntax, psycholinguistics and sociolinguistics; basic theories of second language acquisition; and application of the theories and models of applied linguistics in ESL classroom teaching.

TED 610 Integrating Technology into Subject Matter Instruction 3
Study of ways to integrate a variety of computer-based technologies for teaching and learning content in the K-12 curriculum. Designed for classroom teachers, computer teachers, and computer specialties.

TED 614 Word Study 3
Designed to familiarize educators with underlying developmental theories and teaching strategies for word recognition, spelling, and vocabulary development. Special attention given to issues surrounding phonics.

TED 615 Literacy in the Early Years 3
Course explores how children learn to read and how to facilitate readers’ growth in the primary grades. Emphasis on at-risk readers.

TED 616 Literacy Development and Instruction Across the Elementary Grades 3
Designed to give teachers a deeper understanding of the theories and research behind effective reading instruction for students in the elementary grades.

TED 617A Practicum in Literacy Assessment and Instruction 3
Causes of reading disabilities, diagnostic instruments, standard and informal assessments, report writing, and methods and procedures of challenging readers. Work with individual students or small groups identified as struggling readers.
**Prerequisites:** TED 614, TED 615, and TED 616 or permission of instructor.

TED 617B Advanced Practicum in Literacy Assessment, Instruction, and Leadership 3
Further examination of struggling readers in a supervised, clinical context. Evaluation of formal and informal assessments, the generation of educational prescriptions, and the design of assessment procedures.
**Prerequisites:** TED 617A or permission of instructor.

TED 618 Teaching English as a Second Language 3
Specific instructional methods and strategies to facilitate content area instruction and English language development for students who speak languages other than English.

TED 619 Issues and Trends in Literacy Education 3
Examines contemporary issues in Literacy Education. Special attention to the changing contexts of literacy curricula and instruction.
**Prerequisites:** Minimum of 9 hours in reading education and TED 604 or 605 or permission of instructor.

TED 623 Environmental Education 3
Teachers will design, conduct, and evaluate environmental education activities. Course activities partially fulfill requirements for North Carolina environmental education certification.
**Prerequisites:** TED 545, TED 669, ERM 605, or permission of the instructor.
**Notes:** Weekend field trip is required. May be repeated for credit when topic varies.

TED 625 Mathematics in the Elementary School II 3
**Prerequisites:** Admission to the MAT, Elementary Education concentration, or permission of instructor.

TED 626 Middle Grades Curriculum and Instruction 3
Curricular and instructional principles, processes, and designs applicable to students in the middle grades. Particular emphasis is given to exemplary middle school programs.
**Prerequisites:** Permission of instructor.

TED 628 Trends and Issues in Curriculum and Instruction 3
Examination of selected current trends and issues in curriculum and instruction, focusing on causes, intentions, and effects of policies at the local, state, and national levels.
**Notes:** May be repeated for credit when topic varies.

TED 629 Academic Discourse Communities in Graduate Studies 3
Examines efficient techniques for evaluating academic research and for developing writing and oral skills in different genres of academic discourses appropriate to disciplinary communities.

TED 630 Mathematics Teaching in Middle and Secondary Studies 3
Examines models of mathematics instruction in middle grades and secondary mathematics classrooms.
**Prerequisites:** Permission of instructor.
**Notes:** May be repeated for credit when topic varies.

Historical development and objectives of social studies curriculum in schools; structure of individual disciplines in social studies, trends and new direction in curriculum, and implications of significant research in social studies curriculum and methodology.
**Prerequisites:** Permission of instructor.
**Notes:** May be repeated once for credit when topic varies.

TED 632 Science Education: Teaching Practices and Curriculum 3
Application of reform efforts in the sciences with attention given to eco and social justice perspectives.
**Prerequisites:** Permission of instructor.
**Notes:** May be repeated once for credit when topic varies.

TED 634 Seminar in Middle Grades Education 3
Will focus on the unique needs of students and teachers in middle level schools.
**Prerequisites:** Completion of a course in middle grades curriculum and instruction.

TED 635 Educational Psychology and Differentiated Instruction 3
Understanding and applying current theory and research addressing education psychology (child/adolescent development, learning theory and motivation) and differentiated instruction.
**Prerequisites:** Admission to the Master of Arts in Teaching (M.A.T.) program.

TED 640 Writing Instruction Across the Grade Levels 3
Interrelates knowledge, research and practice in teaching writing as a process across grade levels from elementary through secondary levels. Special attention to implementing the writing process across the curriculum.

TED 641 Literacy I: Reading Instruction 3
Course focuses on how children learn to read and write and what classrooms teachers can do to facilitate their growth as readers and writers in the elementary grades.
**Prerequisites:** Admission to the MAT in Elementary Education, or permission of instructor.
TED 642 Literacy II: Language Arts Instruction 3
Integrated reading and language arts course designed to prepare students to teach reading and writing in the elementary grades. **Prerequisites:** Admission to the MAT in Elementary Education, or permission of instructor.

TED 646 Introduction to Equity Education 3
Designed to support students in expanding their views about equity and education to include family and community practices around broadened understandings of community/cultural assets for pedagogical practices. **Notes:** Same as LIS 676.

TED 647 Teaching and Learning in Makerspaces 3
This course focuses on Making/Makerspace across formal and informal learning contexts. Students will learn a suite of making practices, informed by theoretical lenses grounded in equity and strength-based approaches.

TED 648 Design-based Action Research in Education 3
In this course students in the Design and Making in Education Certificate Program develop and implement a design-based research project to integrate Making into their professional context. **Prerequisites:** TED 646, TED 647, and TED 618 or TED 619 or TED 623 or TED 667 or other course approved by advisor.

TED 650 Establishing and Maintaining a Responsive Classroom Environment 3
Competencies in motivating and increasing student learning through the development of positive interpersonal relationships in the classroom, effective classroom organization and instruction, and altering unproductive student behavior. **Prerequisites:** Permission of instructor.

TED 651 Life Sciences in the Elementary School 3
Analysis and expansion of content knowledge and pedagogical content knowledge related to core ideas and crosscutting concepts in earth sciences appropriate for elementary teachers. **Prerequisites:** Graduate student in teacher education program or permission of instructor.

TED 652 Physical Sciences in the Elementary School 3
Analysis and expansion of content knowledge and pedagogical content knowledge related to core ideas and crosscutting concepts in earth sciences appropriate for elementary teachers. **Prerequisites:** Graduate student in teacher education program or permission of instructor.

TED 653 Earth and Space Sciences in the Elementary School 3
Analysis and expansion of content knowledge and pedagogical content knowledge related to core ideas and crosscutting concepts in earth sciences appropriate for elementary teachers. **Prerequisites:** Graduate student in teacher education program or permission of instructor.

TED 657 Nature of Science, Technology, and Society 3
Study of nature of science, encompassing literature from history, philosophy, and sociology of science. Applications of this literature on school science instruction. **Prerequisites:** TED 559 or equivalent science methods course. **Notes:** May be repeated for credit when topic varies.

TED 658 Number Systems and Operations: K-5 Mathematical Tasks 3
Analysis and construction of effective mathematical tasks in teaching number systems and operations at the K-5 level; attention also given to expansion of content knowledge. **Prerequisites:** Teacher licensure.

TED 659 Rational Numbers and Operations: K-5 Learning Trajectories 3
Focus on rational number concepts through learning trajectories at the K-5 level; attention also given to problem solving and content knowledge. **Prerequisites:** TED 658.

TED 660 Data Analysis and Measurement: K-5 Classroom Interactions 3
Focus on statistical literacy of elementary teachers and the teaching of data analysis and measurement to K-5 students; attention also given to learning methods that facilitate appropriate classroom interactions. **Prerequisites:** TED 658.

TED 661 Algebraic Reasoning: K-5 Discourse and Questioning 3

TED 662 Geometry and Spatial Visualization: K-5 Assessment 3

TED 663 Mathematical Modeling: K-5 Leadership 3

TED 664 Teaching Problem Solving 3
Survey of methods and materials for teaching problem solving and evaluating problem solving performance of students. Development of instructional programs on problem solving and assessment of their effects. **Prerequisites:** Admission to a graduate program, or permission of instructor.

TED 668 Seminar in Mathematics Pedagogy 3
Analysis of alternative pedagogy for specific mathematics content, with design of instruction and assessment based on that analysis. **Notes:** May be repeated for credit. maximum of 6 hours applicable toward any degree.

TED 669 Educational Implications of Learning and Developmental Theory 3
How learning and developmental theories define the teacher’s role as instructional leader, how curricular materials might be designed and used, and student learning and motivation. **Notes:** Same as LIS 669.

TED 670 Research in Mathematics Education 3
Research in mathematics instruction and learning; attention to synthesizing and identifying educational implications of research.

TED 671 Thinking and Learning in Middle Grades and Secondary Mathematics: Number and Algebra 3
An examination of research on the teaching and learning of number and algebra in middle grades and secondary mathematics classrooms.

TED 672 Instructional Design 3
Components of the systems approach to instructional design. **Notes:** Same as LIS 672.

TED 673 Thinking and Learning in Middle Grades and Secondary Mathematics: Geometry, Statistics, and Probabil 3
An examination of research on the teaching and learning of geometry, statistics, and probability in middle grades and secondary mathematics classrooms.

TED 676 Teacher as Researcher and Leader I 3
Leadership skills for teachers working with school, district, state, and/or national initiatives and issues. Course focuses on inquiry, developing an action research proposal, and practical application of findings. **Prerequisites:** ERM 605 and 24 hours of MEd course work, or permission of instructor.
TED 677 Teacher as Researcher and Leader II 3
Conducting and interpreting a teacher action project investigating curriculum, instruction, teaching, and learning. Course focuses on systematic inquiry, conducting research, practical application of findings, and sharing research in professional settings. May be repeated once for credit.
Prerequisites: TED 676.
Notes: May be repeated once for credit.

TED 680A Clinical Experience in Teaching 3-6
Supervised in-school clinical experience. Required full-time teaching.
Prerequisites: Admission to Med, MAT program, or permission of department.

TED 680B Clinical Experience in Teaching Seminar 3
Seminar focused on the ways students learn within the classroom and community context.
Prerequisites: Admission to Med, MAT program, or permission of department.

TED 688 Contemporary Problems Seminar 1-3
Specific course title identified each semester by a subscript (e.g., Contemporary Problems Seminar; Issues in Professional Negotiations).
Prerequisites: Advanced master’s or doctoral standing, or permission of instructor.
Notes: May be repeated for credit when topic varies.

TED 692 Independent Study 1-4
Guided readings, research, and individual project work under direction of a staff member.
Prerequisites: Permission of instructor.

TED 695 Youth Literacies: Advanced Topics in Education 3

TED 696 Classroom Language Assessment 3
An introduction to classroom-based approaches to language assessment for bi-/multi-lingual language learning contexts for in-service and pre-service language teachers.

TED 699 Thesis 1-6
Individual guidance and direction in the development of research problem in the master’s degree thesis.

TED 728 Topics in Curriculum and Instruction 3
Advanced study of special topics in curriculum and teaching.
Prerequisites: Permission of instructor.
Notes: May be repeated up to three times for credit when topic varies.

TED 729 Topics in Math and Science Education 3
This variable-topics course provides an opportunity for advanced study of conceptual or methodological topics in math and science education. Specific course topic identified each semester by an extended title.
Prerequisites: Permission of Instructor.
Notes: May be repeated up to three times for credit when topic varies.

TED 730 Qualitative Methods in Curriculum and Instruction 3
Qualitative research design in education, including its history, philosophy and nature. Includes discussion of types of qualitative research, assessment issues, and critical reading of qualitative research.
Prerequisites: TED 749 or permission of instructor.

TED 735 Design-Based Research in Education 3
Overview of design-based research methods including its history and current literature. Topics include research design, data collection, data analysis, and proposed writing for a design-based research study.

TED 738 Mixed Methods Research Design in Curriculum and Instruction 3
Overview of mixed methods research including its history, current literature, and typology. Topics include research design, data collection, data analysis, validity, and proposed writing for a mixed methods study.

TED 744 Seminar in Composition Studies 3
Studies in special topics related to literacy, the process of composing, composition pedagogy, and composition research.
Prerequisites: ENG 522, ENG 747 or permission of instructor.
Notes: May be repeated once for credit when topic varies, same as ENG 744.

TED 746 Seminar: Research on Teaching 3
Competencies in thinking critically about research on teaching with respect to the findings of research and the methodologies for conducting research on teaching.
Prerequisites: Admission to TED/HED doctoral program and grade of B (3.0) or better in TED 749.

TED 747 Doctoral Seminar in Learning and Cognition 3
TED 749 Disciplined Inquiry in Teacher Education 3
Students will learn about various methods for disciplined inquiry in the fields of curriculum and instruction, begin to develop their research interests, and practice critical reading and writing strategies.

TED 750X Experimental Course 1-6
This number reserved for experimental courses. Refer to the Course Schedule for current offerings.

TED 759 College Teaching Practicum 3
Supervised experiences in teaching college level course(s).
Prerequisites: Advanced standing in the curriculum and teaching doctoral track and permission of instructor.

TED 760 Theory in Math and Science Education 3
Overview of major topics, theories, and influential research programs in math and science education. Students will consider educational research, practice, and policy as well as their intersections.
Prerequisites: Permission of instructor.

TED 761 Student Reasoning in Math and Science Education 3
Course will showcase the complexity and power of K-12 students’ ways of reasoning in math and science in conjunction with research methods for capturing this reasoning.
Prerequisites: Permission of instructor.

TED 762 Pedagogy in Math and Science Education 3
Course will focus on scholarship related to math and science teaching and the development of this expertise, including teacher education for prospective teachers and professional development for practicing teachers.
Prerequisites: Permission of instructor.

TED 765 Research in Equity Education 3
Examines the research knowledgebase in equity education and facilitates the design of culturally sensitive studies. Particular emphasis on race/ethnicity, gender, and class issues related to the design of research studies that affirm equity and perpetuate social justice.
Prerequisites: TED 646 and TED 730 or other qualitative research methodology course or permission of instructor.

TED 767 Qualitative Data Collection and Analysis 3
In-depth experience in qualitative data collection and analysis beyond the introductory level. Completion of a qualitative research project in collaboration with other students in the class.
Prerequisites: ELC 664, ELC 665 or other course in qualitative research.
TED 770 Community Engaged Research and Practice 3
An in-depth exploration of the history, theory, ethics, research methods, and reporting of community-engaged research with an emphasis on positionality and reflexivity. Research practices in community settings are required.
**Prerequisites:** TED 730, ELC 664, ELC 665, ERM 750 or permission of instructor.
**Notes:** Same as ELC 770 and SES 770.

TED 775 Directed Doctoral Research 3

TED 776 Becoming a Scholar in Math and Science Education 3
Individualized directed doctoral research and participation in a collaborative scholarly community of math and science education researchers, which includes engagement in reading group discussions, research meetings, and research sites.
**Prerequisites:** Permission of instructor.
**Notes:** May be repeated up to three times for credit.

TED 799 Dissertation 1-12
Individual direction in the development and execution of a doctoral dissertation.

TED 801 Thesis Extension 1-3
Thesis Extension.

TED 802 Dissertation Extension 1-3
Dissertation Extension.

TED 803 Research Extension 1-3