ASTU 4300. Printmaking Studio. 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): advanced standing and consent of instructor; specific studio courses may require additional prerequisites. May be repeated for credit.

ASTU 4305. Advanced Artist’s Bookmaking. 3 hours. (2;4) Advanced application of the concepts and techniques of bookmaking to create sequential works of art. Emphasis on developing ideas, materials, presentation and basic bookbinding techniques in one-of-a-kind and multiple books. Prerequisite(s): ASTU 3305.

ASTU 4310. Printmaking: Advanced Etching. 3 hours. (2;4) Exploration of concepts and techniques of intaglio printmaking, including classical and experimental techniques. Prerequisite(s): ASTU 3310; selection into the printmaking program through the mid-point review process. May be repeated for credit.

ASTU 4315. Printmaking: Advanced Monotype. 3 hours. (2;4) Advanced exploration of concepts and techniques of monotype printmaking. Classical and experimental techniques are used with special emphasis on seriality and the multiple. Prerequisite(s): ASTU 3315.

ASTU 4320. Printmaking: Advanced Screen Printing. 3 hours. (2;4) Exploration of concepts and techniques of water-based screen printing, including hand-drawn, photographic and experimental techniques. Prerequisite(s): ASTU 3320; selection into the printmaking program through the mid-point review process.

ASTU 4330. Printmaking: Advanced Lithography. 3 hours. (2;4) Exploration of concepts and techniques of lithography, including classical and experimental techniques. Prerequisite(s): ASTU 3330; selection into the printmaking program through the mid-point review process.

ASTU 4340. Printmaking: Advanced Relief Printmaking. 3 hours. (2;4) Exploration of concepts and techniques of relief printmaking. Classical and experimental techniques are used with special emphasis on seriality and the multiple. Prerequisite(s): ASTU 3340; selection into the printmaking program through the mid-point review process.

ASTU 4350. Sculpture Studio. 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3350, advanced standing and consent of instructor. May be repeated for credit.

ASTU 4417. Watercolor Studio. 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3200; AEAH 4812 or AEAH 4813; 3 hours from ASTU 3210 and 3 hours from ASTU 3210, ASTU 3220, ASTU 3230 or ASTU 3417. Students must have passed mid-point review in painting.

ASTU 4450. New Media Studio IV. 3 hours. (2;4) Students in this repeatable advanced-level class are expected to create a body of work consistent with a senior-level studio practice. Covers advanced time-based and interactive media processes for interactive 2D and 3D experiences, film, software art, and NetArt, with a focus on the creation of intelligent physical interfaces, controls and kinetics. Prerequisite(s): ART 1200, ART 1440, ART 1450, ART 1500, ART 1510; ASTU 2450, ASTU 2460, ASTU 3450; or consent of instructor. May be repeated for credit.

ASTU 4460. Advanced New Media Studio. 3 hours. (0;6) Students in this repeatable advanced-level course are expected to create a body of work consistent with a senior-level studio practice. Students have more autonomy in the development of their projects in the path of their selected genre or interest. Project-specific techniques continue to be offered in the areas of 2D/3D animation, film, interactive art, NetArt and kinetic installation. Prerequisite(s): ART 1200, ART 1440, ART 1450, ART 1500, ART 1510; ASTU 2450, ASTU 2460, ASTU 3450, ASTU 3460, ASTU 4450. May be repeated for credit.

Teacher Education and Administration

Bilingual and English as a Second Language Education, EDBE

EDBE 3470. Foundations of Bilingual and English as a Second Language Education. 3 hours. Examination of philosophies and theoretical underpinnings of bilingual and ESL education, including a review of historical antecedents of bilingual education and evolution of federal and state language policies governing the education of language-minority children. Required for students seeking EC–6 or 4–8 generalist certification with specialization in bilingual or ESL education. Prerequisite(s): admission to Teacher Education or consent of department. May be taken concurrently with EDBE 3480.

EDBE 3480. Bilingualism/Multiculturalism for English Language Learning: Issues and Perspectives. 3 hours. Study of the bilingual/ESL learner; perspectives on multiculturalism; discussions of cognitive, social and affective factors impacting second language development; insights into education in a pluralistic society. Three lecture hours a week. Fifteen (15) hours of field experiences are required. Required for students seeking EC–6 or 4–8 generalist certification with specialization in bilingual or ESL education. Prerequisite(s): admission to Teacher Education or consent of department. May be taken concurrently with EDBE 3470.

EDBE 4470. Curriculum and Assessment for Bilingual/ESL Education. 3 hours. Examination of the organization of curriculum for second language learners with special focus on testing and evaluation procedures appropriate for bilingual and ESL classrooms; study of formal and informal assessment of language proficiency for instructional purposes and use of standardized achievement tests. Required for students seeking EC–6 or 4–8 generalist certification with specialization in bilingual or ESL education. Prerequisite(s): admission to Teacher Education or consent of department. May be taken concurrently with EDBE 4490.

EDBE 4480. Bilingual Approaches to Content-Based Learning. 3 hours. (3;0;1.5) Study of appropriate first language usage in bilingual classrooms, focusing on different core curriculum areas, methods and materials and review of language distribution strategies. Focus on responsive instruction that makes use of effective communication techniques and instructional strategies that actively involve students in the learning process. Required for students seeking EC–6 or 4–8 generalist certification with specialization in bilingual or ESL education. Requires 1.5 hours per week field experience in a bilingual education classroom. Language of instruction is Spanish. Prerequisite(s): EDBE 3470 and EDBE 3480, admission to Teacher Education or consent of department and successful completion of departmental proficiency examination in Spanish.
EDEC 4900. Special Problems. 1–3 hours. Open to advanced students capable of developing a problem independently. Problems chosen by student and developed through conferences with the instructor.

EDEC 4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

Educational Administration and Supervision – see Graduate Catalog

Educational Curriculum and Instruction – see Graduate Catalog

Educational Foundations, EDUC

EDUC 4800. Studies in Education. 1–3 hours. Organized classes for specific program needs and student interest. Prerequisite(s): consent of department. Limited-offering basis. May be repeated for credit.

EDUC 4900-EDUC 4910. Special Problems. 1–3 hours. Open to advanced students capable of developing a problem independently. Problems chosen by student and developed through conferences with the instructor.

EDUC 4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

Elementary Education, EDEE

EDEE 2000. Exploring Diversity Through Social Action. 3 hours. (3;0/45) Exploration of issues related to race and ethnicity, gender, social class, learning differences, and sexual orientation as they impact education in the U.S. Required for students seeking grades 4–8 teacher certification. Satisfies a portion of the Understanding the Human Community requirement of the University Core Curriculum.

EDEE 3320. Foundations of Education: The School Curriculum. 3 hours. Principles and foundations of curriculum for grades EC–8 in public schools. Includes the study of professional ethics/responsibilities, educational philosophies, the history of American education, schools and society, school and community/parent relationships, legal/political control and financial support, school/classroom organizational patterns, and curriculum development/alignment. Prerequisite(s): admission to the teacher education program (includes participation in a field-based program), a child/adolescent/lifespan development course, and an educational-application computer course.

EDEE 3380. Teaching and Learning in Grades EC–6. 3 hours. Effective teaching practices through reflective decision making in grades EC–6. Includes the fundamental teaching skills of planning for instruction, implementing appropriate teaching strategies, integrating the curriculum, integrating technology into teaching, grouping children for instruction, acquiring appropriate materials/resources, assessing student learning, and establishing and maintaining a safe and effective learning environment. Prerequisite(s): admission to the teacher education program (includes participation in a field-based program), with a child/adolescent/lifespan development course, and an educational-application computer course.
EDEE 4101-EDEE 4102. Student Teaching in Pre-K through Grade 4. 3 hours each. Teaching under supervision in pre-kindergarten through grade 4. Prerequisite(s): admission to the teacher education program; EDEE 3320, EDEE 3380, EDEE 4330, EDEE 4340, EDEE 4350; EDRE 4860. Required for those seeking Pre-K–4 certification. See Student Teaching Program for details. Pass/no pass only.

EDEE 4330. Science in Grades EC–6. 3 hours. (3;0;16) Subject matter background and material organization for an integrated science program in primary and elementary school. Students experience firsthand the scope and sequence of science education. Assignments, directed field experience and other class activities take place on site in an EC–6 school setting. Prerequisite(s): admission to the teacher education program, which includes participation in a field-based program, EDEE 3320, EDEE 3380; all courses in the reading/English/language arts part of the academic major; required core and academic major science courses and DFST classes.

EDEE 4340. Social Studies in Grades EC–6. 3 hours. (3;0;16) Principles of teaching social studies in the primary and elementary school. Students observe social studies instruction and materials in real settings, apply principles of social studies instruction in classroom settings and experience first-hand the scope and sequence of the curriculum in a school setting. Assignments, directed field experience and other class activities take place in grades EC–6. Prerequisite(s): admission to the teacher education program, which includes participation in a field-based program, EDEE 3320, EDEE 3380; all courses in the reading/English/language arts part of the academic major; required core and academic major social studies courses and DFST classes.

EDEE 4350. Mathematics in Grades EC–8. 3 hours. (3;0;16) Principles in mathematics teaching and learning based on national curriculum and assessment standards. The learning process in the development of mathematical thinking and skills in children. Students observe mathematics instruction and materials in real settings and experience firsthand the scope and sequence of mathematics in a primary/elementary/middle school setting. Assignments, directed field experience and other class activities take place on site in a school setting. Prerequisite(s): admission to the teacher education program, which includes participation in a field-based program, EDEE 3320, EDEE 3380; all courses in the reading/English/language arts part of the academic major; required core and academic major math courses and DFST classes.

EDEE 4800-EDEE 4810. Studies in Education. 1–3 hours each. Organized classes for specific program needs and student interest. Prerequisite(s): admission to teacher education and consent of department. Limited-offering basis. May be repeated for credit.

EDEE 4900-EDEE 4910. Special Problems. 1–3 hours each.

EDEE 4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

**Middle School Education, EDME**

EDME 3380. Teaching and Learning in the Middle Grades. 3 hours. Provides middle-level teacher candidates with the knowledge and skills to teach young adolescents. Topics include young adolescent development; the middle level philosophy and school organization; middle level curriculum, instruction and assessment teaching skills; and middle level professional roles. Prerequisite(s): admission to the teacher education program (includes participation in a field-based program), an adolescent/lifespan development course, and an educational-application computer course.

EDME 4103-EDME 4104. Student Teaching in Grades 4–8. 3 hours. Teaching under supervision in grades 4 through 8. Prerequisite(s): admission to teacher education program; EDEE 3320, EDM 3380; the required EDME content-specific methods course, EDRE 4870, and the required EDBE courses. Required for those seeking grades 4–8 certification. See Student Teaching Program for details. Pass/no pass only.

EDME 4330. Science in Grades 4–8. 3 hours. Subject matter background and material organization for an integrated science program in the upper-elementary and middle school. Students experience first-hand the scope and sequence of science education. Assignments, directed field experience, and other class activities take place on site in an upper-elementary or middle school setting. Prerequisite(s): admission to the teacher education program (includes participation in a field-based program), LTEC 4100, DFST 4133, EDEE 2000, EDEE 3320, EDEE 4060, EDSP 3210, and required core and academic major science courses.

EDME 4340. Social Studies in Grades 4–8. 3 hours. Principles of teaching social studies in the upper-elementary and middle school. Students observe social studies instruction and materials in real settings, apply principles of social studies instruction in classroom settings, and experience firsthand the scope and sequence of the curriculum in an upper-elementary or middle-school setting. Assignments, directed field experience and other class activities take place in an upper-elementary or middle school setting. Prerequisite(s): admission to the teacher education program, which includes participation in a field-based program, LTEC 4100, DFST 4133, EDEE 2000, EDEE 3320, EDEE 4060, LTEC 4100, LTEC 4103, LTEC 4104; the required EDME content-specific methods course, EDRE 4870, and the required EDBE courses. Required for those seeking grades 4–8 certification. See Student Teaching Program for details. Pass/no pass only.

EDME 4351. Teaching Mathematics in Grades 4–8. 3 hours. Offers candidates a constructivist approach to helping students develop a knowledge of mathematics in grades 4–8. Teaching strategies are presented with developmental activities that are used with middle grade students. Students reflect on what it means to teach mathematics and explore the factors that influence teaching. Prerequisite(s): admission to the teacher education program, which includes participation in a field-based program, LTEC 4100, LTEC 4103, LTEC 4104, LTEC 4100, LTEC 4103, LTEC 4104; required core and academic major math courses and EDEC and DFST classes.

EDME 4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.
Reading, EDRE

EDRE 1200. Developmental Reading. 3 hours. Strategies for improving comprehension of college texts. Includes vocabulary development, comprehension monitoring, critical reading, summarizing and rate flexibility. Students must complete the course with a passing grade of at least a C. Credit in this course does not fulfill any degree requirement.

EDRE 4450. Reading and Writing (Birth through Grade 4). 3 hours. (3:0:0) Examines theoretical and practical aspects of emergent literacy. The course focuses on developmentally appropriate practices that foster motivated, strategic readers and writers. Emphasizes development of early language and pre-literacy skills, common school literacy practices, parental/social influences and affective elements related to early reading. Includes an additional hour of field experience per week. Prerequisite(s): admission to the teacher education program and DFST 3123.

EDRE 4800-EDRE 4810. Studies in Education. 1–3 hours each. Organized class for program needs and student interest needs. Prerequisite(s): consent of department. Limited-offering basis. May be repeated for credit.

EDRE 4820. Reading and Writing in Grades 4–8. 3 hours. Examines reading and writing processes, the development of reading and writing abilities and skills, theories and models of reading, the nature of the balanced reading program, instructional strategies, planning and materials for the 4–8 literacy learning environment. Prerequisite(s): admission to the teacher education program.

EDRE 4840. Linguistically Diverse Learners. 3 hours. Designed to enhance the awareness and understanding of pre-service teachers regarding the linguistically diverse learner. Includes study of the language and learning needs of language minority students, affective aspects of the immigrant and refugee experiences and their impact on academic and linguistic development. Students will explore how to make practical application of course content in both the regular and the English-as-a-Second-Language classrooms. Prerequisite(s): admission to the teacher education program; EDRE 4450 or EDRE 4820 (may be taken concurrently); LING 3060 (may be taken concurrently).

EDRE 4850. Assessment and Evaluation of Reading. 3 hours. Examines a variety of assessment and evaluation strategies that are appropriate for the classroom teacher to utilize. Although both formal and informal procedures are introduced, the main focus is on non-intrusive, naturalistic procedures. Observations are required. Prerequisite(s): EDRE 4450 or EDRE 4820.

EDRE 4860. Reading and the Language Arts in Grades EC–8. 3 hours. Problems related to the comprehension and expansion of symbols of meaning; the interrelationship of reading with other areas of language arts. Prerequisite(s): admission to the teacher education program, which includes participation in a field-based program; EDEE 3320 and EDEE 3380; required courses in the reading/English/language arts part of the academic major and required DFST courses.

EDRE 4870. Cross-Curricular (Content Area) Literacy Materials and Resources. 3 hours. Prepares pre-service teachers within both EC–6 and 4–8 certificate programs to plan for and implement literacy instruction across the curriculum. Selecting, evaluating and using developmentally and culturally appropriate materials and resources will be a focus as well as using content literacy strategies which support independent reading and writing in the content areas. Prerequisite(s): admission to the teacher education program; EDRE 4450 (for EC–6) or EDRE 4820 (for 4–8 English Language Arts) or EDSE 4060 (for 4–8 Social Studies, Science or Mathematics).

EDRE 4990-EDRE 4910. Special Problems. 1–3 hours each.

Secondary Education, EDSE

EDSE 3500. Knowing and Learning in Mathematics and Science. 3 hours. Psychological foundations of learning. Problem solving in mathematics and science education utilizing technology. Principles of expertise and novice understanding of subject matter. Implications of high stakes testing. Foundations of formative and summative assessment. Prerequisite(s): admission to the Teach North Texas program, a university grade point average of at least 2.50 and TNYX 1100 (may be taken concurrently) or consent of a Teach North Texas advisor in the College of Arts and Sciences.

EDSE 3800. Professional Issues in Teaching. 3 hours. An overview of American secondary education, including history, purposes, legal bases, school organization, education as a profession and analysis of characteristics required for professional success.

EDSE 3830. Teaching/Learning Process and Evaluation. 3 hours. Examines the processes of learning and the phenomena of adolescent development as they relate to teaching in the secondary school. Prerequisite(s): junior standing and admission to teacher education.

EDSE 4000. Classroom Interactions. 3 hours. Principles of delivering effective instruction in various formats (lecture, lab activity, collaborative settings). Examination of gender, class, race and culture in mathematics and science education. Overview of policy related to mathematics and science education. Prerequisite(s): admission to the Teach North Texas Program, a university grade point average of at least 2.50, TNYX 1200 and EDSE 3500.

EDSE 4060. Content Area Reading in Secondary Schools. 3 hours. (0:0:3) Provides an overview of the reading process with emphasis on reading to learn in the secondary school content areas. Course provides knowledge and skills for identifying reading problems, modifying instructional materials and processes, and using writing to promote learning and thinking in the content areas. Instruction, assignments, directed field experience and other class activities may take place on site in a school setting. Prerequisite(s): junior standing and admission to teacher education.

EDSE 4070. Teaching Diverse Populations. 3 hours. (0:0:3) Provides knowledge and skills required for developing and implementing challenging instruction for students who are culturally different, students who receive special education services and students who are identified as gifted and talented. Instruction, assignments, directed field experience and other class activities may take place on site in a school setting. Prerequisite(s): junior standing and admission to teacher education.

EDSE 4108-EDSE 4118. Student Teaching in the Secondary School. 3 hours each. Teaching under supervision. Prerequisite(s): EDSE 3800, EDSE 3830, EDSE 4060, EDSE 4070 and EDSE 4840, and senior standing. Required for those seeking secondary certification. See Student Teaching Program for details. Pass/no pass only.
EDSE 4128. Student Teaching Seminar in Science, Math and Computer Science. 1 hour. Discussions include student teaching experiences. Contemporary critical issues in education. Preparation for the state certification exam. Prerequisite(s): TNTX 1100 and TNTX 1200; EDSE 3500, EDSE 4000 and EDSE 4500; concurrent enrollment in EDSE 4608 and EDSE 4618; and senior standing.

EDSE 4500. Project-Based Instruction in Math, Science and Computer Science. 3 hours. Foundations of project-based, case-based and problem-based learning environments. Principles of project-based curriculum development in mathematics and science education. Classroom management and organization of project-based learning classrooms. This capstone course should be taken just prior to student teaching. Prerequisite(s): admission to the Teach North Texas program, a university grade point average of at least 2.50, and TNTX 4000.

EDSE 4608. Student Teaching I in Mathematics and Science. 3 hours. (0;0;6) Teaching under supervision. Required for students seeking secondary certification. See the Teach North Texas program for details. Prerequisite(s): TNTX 1100 and TNTX 1200; EDSE 3500, EDSE 4000 and EDSE 4500; concurrent enrollment in EDSE 4128; and senior standing.

EDSE 4618. Student Teaching II in Mathematics and Science. 3 hours. (0;0;6) Teaching under supervision. Required for students seeking secondary certification. See the Teach North Texas program for details. Prerequisite(s): TNTX 1100 and TNTX 1200; EDSE 3500, EDSE 4000 and EDSE 4500; concurrent enrollment in EDSE 4128; and senior standing.

EDSE 4800-EDSE 4810. Studies in Education. 1–3 hours each. Organized classes for program needs and student interest. Prerequisite(s): consent of department. Limited-offering basis. May be repeated for credit.

EDSE 4840. Instructional Strategies and Classroom Management. 3 hours. (0;0;3) Taken during the semester immediately preceding student teaching, this course provides knowledge and skills required for organizing and directing various instructional strategies in the secondary classroom. Content includes teaching strategies, approaches to classroom management and discipline, student motivation, and teacher assessment and evaluation, and the use of media and technology in the classroom. Instruction, assignments, directed field experience and other class activities may take place on site in a school setting. Must complete 55 hours of field experience in assigned middle and high schools. Prerequisite(s): junior standing, admission to teacher education, and completion of or concurrent enrollment in all education course work excluding student teaching.

EDSE 4900-EDSE 4910. Special Problems. 1–3 hours each.

EDSE 4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

Teach North Texas

Teach North Texas, TNTX

TNTX 1100. Secondary Teacher Education Preparation I: Inquiry Approaches to Teaching. 1 hour. (1;0;1) Introduction to mathematics, computer sciences and science teaching as a career. Discussions include standards-based lesson design and various teaching and behavior management strategies. Fieldwork consists of planning and teaching four inquiry-based lessons to students in grades 3–5 in local elementary schools. Prerequisite(s): admission to the Teach North Texas Program; see the Teach North Texas advisor for details.

TNTX 1200. Secondary Teacher Education Preparation II: Inquiry-Based Lesson Design. 1 hour. (1;0;1) Topics may include routes to teacher certification in mathematics, computer sciences and science teaching; various teaching methods designed to meet instructional goals; learner outcomes. Students develop and teach three inquiry-based lessons in the field in a middle school and participate in peer coaching. Prerequisite(s): TNTX 1100 or consent of Teach North Texas advisor.

TNTX 1300. Secondary Teacher Education Preparation I and II: Inquiry-Based Lessons. 2 hours. (2;1) One-semester introduction (equivalent to TNTX 1100 and TNTX 1200) to mathematics, computer science and science teaching as a career. Discussions include standards-based lesson design and various teaching and behavior management strategies. Topics may include various teaching methods designed to meet instructional goals and learner outcomes. Students develop and teach three inquiry-based lessons in their field in a middle school and participate in peer coaching. Students may not enroll in TNTX 1300 if they have completed TNTX 1100 and TNTX 1200. Prerequisite(s): junior status and consent of the Teach North Texas advisor.

TNTX 4900–TNTX 4910. Special Problems. 1–3 hours. Prerequisite(s): TNTX 1100 and TNTX 1200 (or TNTX 1300), and consent of department. May be repeated for credit as topics vary.

TNTX 4930. Selected Topics in Mathematics and Science Teaching. 3 hours. Topics of current interest, which vary from year to year. Prerequisite(s): TNTX 1100 and TNTX 1200 (or TNTX 1300), and consent of department.

Technical Communication
see Linguistics and Technical Communication

Theatre
see Dance and Theatre

Theory, Music
see Music