# TEACHER EDUCATION

## **Department of Teacher Education College of Education**

### Seminar in Integrated Science for 120

Elementary Schools Spring. 1(1-1) Interdepartmental with Integrated Science Education. Administered by Integrated Science Education. P: (BS 161 or BS 162 or BS 181H or BS 182H or LB 144 or LB 145) or (CEM 141 or PHY 231 or PSL 250 or GLG 201 or GEO 203) R: Open to students in the College of Education or in the Education major or in the Special Education major or approval of college. SA: SME 120

TE

Exploration of major connecting themes in life sciences, earth science, and physical science as evidenced in the K-8 science curriculum and college science courses.

### **Reflections on Learning** 150

Fall, Spring, Summer. 3(3-0) Interdepart-mental with Counseling, Educational Psy-chology and Special Education. Adminis-tered by Teacher Education.

Students' experiences as learners in comparison to psychological, sociological, and anthropological theories and assumptions about learning and teaching in and out of school.

### **Current Issues in Education** 201

Fall, Spring. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Educational Administration. Administered by Teacher Education.

Contemporary and perennial issues in elementary, secondary, and higher education.

### Human Diversity, Power, and 250 **Opportunity in Social Institutions**

Fall, Spring, Summer. 3(3-0)

Comparative study of schools and other social institutions. Social construction and maintenance of diversity and inequality. Political, social and eco-nomic consequences for individuals and groups.

### **Special Topics in Urban Education** 291A

Fall, Spring. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: Freshman and sophomore students recruited into teaching in the College of Educations Urban Educators Cohort Initiative.

Issues in teaching and learning for prospective teachers Strategies for professional development during and after ones teacher preparation program.

### 301 Literacy, Learners, and Learning in Context - Elementary (W)

Fall, Spring, Summer. 3(2-4) P: TE 150 and Completion of Tier I Writing Requirement and (TE 250 or CEP 240 or HDFS 212) R: Not open to freshmen or sophomores and open to students in the elementary teacher certification program (admitted).

Language and literacy development in sociocultural context at the elementary level (K-8). Natural and socially constructed differences among learners. How to learn about a child. Ten components of literacy. Assessment. Reading or writing related disability.

### 302 Learners and Learning in Contexts -Secondary (W)

Fall, Spring, Summer. 4(3-4) P: TE 150 and ((TE 250 or CEP 240) and completion of Tier I writing requirement) R: Not open to freshmen or sophomores. Open only to students admitted to the secondary teacher certification program.

Role of social context and sociocultural background in learning at the secondary level (7-12). Natural and socially constructed differences among learners. Relationship among subject-specific knowledge, teaching and learning that subject, and the institutional and communal context. Multiple literacies.

### Algebra for Elementary and Middle 304 School Teachers

Fall. 3 credits. Interdepartmental with Mathematics. Administered by Mathematics. P: (MTH 201 and MTH 202 and MTH 301) and completion of Tier I writing requirement R: Open to undergraduate students in the College of Education or in the Department of Teacher Education. Approval of department.

Algebra needed for understanding connections between topics of algebra and the mathematics taught in elementary and middle school.

### 305 Functions and Calculus for Elementary and Middle School Teachers (W)

Spring. 3 credits. Interdepartmental with Mathematics. Administered by Mathematics. P: MTH 304

Functions and calculus needed for understanding connections between topics of calculus and the mathematics taught in middle school.

### Integrated Science for Elementary 320 Schools

Spring. 3(2-2) Interdepartmental with Integrated Science Education. Administered by Integrated Science Education. P: ISE 120 and (BS 161 or BS 162 or BS 181H or BS 182H or LB 144 or LB 145 or PSL 250 or ZOL 355) and (PHY 231 or PHY 231C or CEM 141 or LB 171) and (GLG 201 or GEO 203 or AST 207) R: Open to students in the Integrated Science Elementary Teaching Major. SA: SME 320 Not open to students with credit in ISE 301.

Analysis of the concepts integrating science across life sciences, earth sciences, and physical sciences. Applications to the K-8 science curriculum.

### Reading and Responding to Children's 348 Literature

Fall, Spring, Summer. 3(3-0) Literary understanding and genres in reading and teaching children's literature. Critical and theoretical perspectives in evaluating children's literature. Children's responses to literature. Literary, social, and pedagogical issues in the study of children's literature

#### 351 **Urban Education**

Spring of even years. 3(3-0) Teaching and learning in urban institutions. Urban context and impact on schools. Urban school reform initiatives

### 352 Immigrant Language and Culture Spring of odd years. 3(3-0)

Minority language communities and cultures. Family literacy issues and values. Emergent and adolescent literacy development. Parenting and parental involvement. Home-school connection. Family literacv programs.

### 353 International Education

Spring of even years. 3(3-0)

Education in the global economy. Access and achievement, gender differences, pedagogy and culture, role of home and community, school resources, teacher quality and policy, policy challenges in developing countries, role of international organizations, privatization of higher education.

### **Educational Reform and Policy Analysis** 361

Fall. 3(3-0) Interdepartmental with Educational Administration. Administered by Educational Administration.

Analysis of prominent current K-12 and higher educational reforms and policies in the United States.

### 403 **Teaching of Science to Diverse Learners** - Elementary

Fall. 3(3-2) P: ((ISE 301 or ISE 320 or ISE 420) and completion of Tier I writing requirement) and TE 301 R: Not open to freshmen or sophomores and open to students in the elementary teacher certification program (admitted).

Teaching science to diverse learners at the elementary level (K-8). Inquiry into and construction of subject-specific meaning. Science subject matter adapted to learner diversity. Teachers' roles, including professional, intellectual, and sociopolitical responsibilities.

## Teaching of Social Studies to Diverse 404

Learners - Elementary Fall. 3(3-2) P: (TE 301) and completion of Tier I writing requirement R: Not open to freshmen or sophomores and open to students in the elementary teacher certification program (admitted).

Teaching social studies to diverse learners at the elementary level (K-8). Inquiry into and construction of subject-specific meaning. Social studies subject matter adapted to learner diversity. Teachers' roles, including professional, intellectual, and sociopolitical responsibilities.

### 405 Teaching of Language and Literacy to Diverse Learners - Elementary

Spring. 3(3-2) P: (TE 403 and TE 404 and TE 348) and completion of Tier I writing requirement R: Not open to freshmen or sophomores and open to students in the elementary teacher certification program (admitted).

Teaching language and literacy to diverse learners at the elementary level (K-8). Inquiry into and construction of subject-specific meaning. Literacy subject matter adapted to learner diversity. Teachers' roles, including professional, intellectual, and sociopolitical responsibilities.

### 406 **Teaching of Mathematics to Diverse**

Learners - Elementary Spring. 3(3-2) P: (MTH 201 and MTH 202 and TE 403 and TE 404) and completion of Tier I writing requirement R: Not open to freshmen or sophomores and open to students in the elementary teacher certification program (admitted).

Teaching mathematics to diverse learners at the elementary level (K-8). Inquiry into and construction of subject-specific meaning. Mathematics subject matter adapted to learner diversity. Teachers' roles, including professional, intellectual, and sociopolitical responsibilities.

## 407 Teaching Subject Matter to Diverse Learners – Secondary (W)

Fall. 5(3-8) P: (TE 301 or TE 302) or completion of Tier I writing requirement R: Not open to freshmen or sophomores. Open only to students admitted to the secondary teacher certification program.

Examining teaching as enabling diverse learners to inquire into and construct subject-specific meanings at the secondary level (7-12). Adapting subject matter to learner diversity. Exploring multiple ways diverse learners make sense of the curriculum.

## 408 Crafting Teaching Practices – Secondary (W)

Spring. 6(4-8) P: (TE 407) and completion of Tier I writing requirement R: Not open to freshmen or sophomores. Open only to students admitted to the secondary teacher certification program.

Gathering data on learners to inform content and instructional decisions. Deciding what should be taught for specific disciplines at the secondary level (7-12). Teachers' multiple roles and their professional, intellectual, sociopolitical, and communal responsibilities.

## 420 Integrated Science Research

Fall, Spring. 3(2-2) Interdepartmental with Integrated Science Education. Administered by Integrated Science Education. R: Open to seniors in the General Science Secondary Teaching Major and open to seniors in the Integrated Science Elementary Teaching Major. SA: SME 420

Research design and data analysis of individual research projects relevant to the K-12 science curriculum, integrating topics in life, earth, and physical science.

## 448 Issues of Diversity in Children's and Adolescent Literature

Fall, Spring, Summer. 3(3-0) P: TE 348 Theoretical perspectives, controversies, and classroom implications for literature by and about people who have traditionally been underrepresented in children's and adolescent literature. Literature by and about African Americans, Asian Americans, Latinos and Latinas, American Indians, Middle Eastern Americans, and groups traditionally defined by class, religion, ability, gender, and sexuality.

## 458 Reading, Writing, and Teaching Poetry Fall. 3(3-0) R: Open to undergraduate students in the College of Education.

dents in the College of Education. Reading poetry, writing from prompts, peer workshops, pedagogical strategies.

490 Independent Study in Teacher Education Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Not open to freshmen or sophomores. Open only to students admitted to the teacher certification program. Approval of department.

Supervised individual or small group study of the practice of teaching.

## 491 Special Topics in Teacher Education

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Not open to freshmen or sophomores. Open only to teacher certification candidates.

Aspects of teaching practice and inquiry into practice.

### 494 Field Experience in Teacher Education Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Approval of department.

Supervised practica and/or observations in educational settings.

## 495 Student Teaching in Music

Fall, Spring, 9 credits. Interdepartmental with Music. Administered by Music. R: Open to seniors in the Bachelor of Music in Music Education.

Supervised music teaching experience in schools. On-campus seminar required.

## 496 Becoming a School Music Teacher

Fall, Spring. 3(2-3) R: Open to seniors in the Music Education Major. Not open to students with credit in TE 801 or TE 803. C: MUS 495 concurrently.

Teachers' professional and ethical responsibilities. Relations of teachers to colleagues, families, social service providers and community leaders. Teacher's role in school governance and accountability.

## 501 Internship in Teaching Diverse Learners I

Fall. 6(2-24) P: TE 405 or TE 406 or TE 408 or STA 482 R: Open to students in the Teacher Certification Internship Year Studies Program.

Directed and evaluated internship in heterogeneous classrooms. Teaching worthwhile content to students with varied learning needs. Theoretical and field-based explorations of common teaching dilemmas.

## 502 Internship in Teaching Diverse Learners

Spring. 6(2-24) P: TE 501 R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 502A or CEP 502C.

Continuing internship in heterogeneous classrooms at selected schools. Increased emphasis on independent teaching. Maintaining classroom communities that ensure equitable access to important knowledge and skills. Assessing academic and social outcomes.

## 801 Professional Roles and Teaching Practice I

Fall. 3(2-3) P: TE 405 or TE 406 or TE 408 or STA 482 R: Open to students in the Teacher Certification Internship Year Studies Program. Not open to students with credit in CEP 801A.

Teachers' professional and ethical responsibilities. Connections of schools to other social agencies. Relations of teachers to colleagues, families, other social service providers, and community leaders. Roles in school governance.

## 802 Reflection and Inquiry in Teaching Practice I

Fall. 3(2-3) P: TE 405 or TE 406 or TE 408 or STA 482 R: Open to students in the Teacher Certification Internship Year Studies Program. Not open to students with credit in CEP 802A or CEP 802C.

Qualitative and quantitative research methods on teaching and learning. Criteria for judging the validity and applicability of research-based knowledge. Framing educational problems worthy of inquiry. Designing and assessing studies of teaching practice.

## 803 Professional Roles and Teaching Practice II

Spring. 3(2-3) P: TE 801 R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 803A or CEP 803C.

School-agency alliances for fostering student learning. Strategies for working with families and community groups to improve responsiveness of the school curriculum to student needs. Child advocacy in the school and community.

### 804 Reflection and Inquiry in Teaching Practice II

Spring. 3(2-3) P: TE 802 R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 804A or CEP 804C.

Collecting, analyzing, and interpreting data on teaching, learning, and educational policy. Dilemmas surrounding research on practice. Appraising and reporting results of inquiry.

## 805 Learning Mathematics with Technology

Fall. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education.

Current technologies for teaching and learning mathematics with understanding. Technology for multiple representations of mathematical ideas, modeling, and authentic learning environments. Psychological and mathematical perspectives on learning mathematics.

## 806 Learning Science with Technology

Spring. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education.

Possibilities, ideas, and issues associated with teaching science with technology. How K-12 teachers use Internet resources (e.g. simulations, databases, communities) to facilitate science learning. Contemporary conceptual perspectives from educational psychology on important issues of learning.

## 807 Professional Development and Inquiry Fall, Summer. 3(3-0)

Teacher-centered inquiry through autobiography and documentation of self as learner. Relationship of personal research to classroom-based research. Application to practice.

## 808 Inquiry into Classroom Teaching and Learning

Fall, Spring, Summer. 3(3-0) Alternative forms of classroom inquiry to improve teaching and learning of subject matter. Social context of teaching and learning, pedagogy, and teaching effects. Social and academic outcomes for diverse learners.

## 810 History of American Education

Spring of odd years. 3(3-0) Social and intellectual history of educational ideals and institutions. Legacies of reform initiatives. Evolution of the education profession.

## 811 Philosophical Inquiry and Contemporary Issues in Education Fall, Spring. 3(3-0)

Philosophies of education. Analytic tools used for evaluating current educational goals, practices, issues, and reforms.

### 813 Education, Development and Social Change

Spring of odd years. 3(3-0) Interdepartmental with Educational Administration. Administered by Educational Administration. Rise of modern systems of education in developed and developing countries. Education, the state, and national development. Colonial heritage, linkages, and globalization of educational development.

### 815 **Comparative Analysis of Educational** Practice

Fall of even years. 3(3-0) Cross-national comparison of educational practices in light of differences in culture, social organization, economic conditions, and historical circumstance. International perspectives on education in the United States. Borrowing and adapting educational practices.

### 816 **Education in Transition**

Fall of odd years. 3(3-0) Comparative analysis of change in educational concepts, policies, and practice.

### 818 **Curriculum In Its Social Context** Fall, Spring. 3(3-0)

Philosophical, social, and historical foundations of curriculum. Issues and practices across subjects, grades, and school settings. Moral consequences of curriculum decisions for teachers and students.

### Power and Pluralism in School Practice 820 Spring of odd years. 3(3-0)

Connections between schools and diversity, inequality, and power in society. Genesis and consequences of school policies for diverse learners.

### Issues of Culture in Classroom and 822 Curriculum

Fall of odd years. 3(3-0)

Socio-cultural contexts and functions of schooling. Cultural diversity in education. Schools and classrooms as cultural systems. Students' cultural backgrounds in relation to curriculum. Developing effective multicultural curricula for all students.

### 823 Learning Communities and Equity Spring, 3(3-0)

Cooperative grouping and heterogeneous learning teams. Impact of learning communities on equity and on school curricula.

### 825 **Diverse Learners and Learning Subject** Matter

Summer. 3(3-0)

Multiple perspectives on teaching subject matter to diverse learners. Texts, curricula, and pedagogical approaches. Subject-specific issues related to classroom diversity.

### 830 **Designing Interdisciplinary Curricula** Spring of even years. 3(3-0)

Historical and conceptual analyses of ways to design, organize, and integrate curricula across subject areas. Evaluation and application of criteria for planning and teaching interdisciplinary curricula.

### 831 **Teaching School Subject Matter with** Technology

### Fall, Spring. 3(3-0) Uses of technologies in teaching subject matter to diverse learners. Critical perspectives on technoloaies in schools.

### 836 Awards and Classics of Children's Literature

Spring of even years, Summer of odd years. 3(3-0) RB: TE 849 SA: TE 883B

Critical examination of literary classics and award books for children, including children's responses to this literature

### 838 Children's Literature in Film Summer. 3(3-0)

Applies media and film studies perspectives to films created from children's literature.

### **Elementary Reading Assessment and** 842 Instruction

Fall, Summer. 3(3-0) Characteristics of effective reading assessment and

# instruction as identified in research and described by respected reading researchers and practitioners.

### 843 Secondary Reading Assessment and Instruction Spring. 3(3-0)

Knowledge and methodology for teaching language, literacy, and thinking in selected secondary school subjects.

### Language Diversity and Literacy 845 Instruction and Assessment

Fall. 3(3-0) RB: One introductory linguistics course.

Acquisition of literacy in schools by and assessment of language minority students and other learners with diverse backgrounds.

### Accommodating Differences in Literacy 846 Learners

Fall, Spring, Summer. 3(3-0) RB: Access to two K-12 students for course requirement to conduct two case studies.

Developmental processes, instructional practices, and assessment principles that contribute to effective learning of reading and writing. Teaching methods for accommodating the different needs of individual literacy learners.

### Writing Assessment and Instruction 848

Spring of even years. 3(3-0) RB: TE 847 Writing theory, research, and pedagogy. Writing processes, strategies, assessments, and environments that address diverse writers (K-adult). Expository, narrative, and poetic genres. Prewriting, composing, revising, editing, and publishing

### Methods and Materials for Teaching 849 **Children's and Adolescent Literature**

Fall of odd years, Spring of odd years, Summer of even years. 3(3-0)

Evaluation and utilization of various genres and elements of literature with focus on literature for students in grades K-12.

### Critical Reading for Children and 850 Adolescents

Fall of even years. 3(3-0) Teaching and learning of critical and aesthetic re-

sponses to literature for K-12 students.

### 851 Literacy for the Young Child in Home and School

Spring of odd years. 3(3-0) RB: TE 849 Literacy development in children from early infancy through age six, with emphasis on evaluation and utilization of writings for young children.

### 853 Assessing and Responding to Literacy Learning Difficulties I

Fall. 3(3-0) P: (TE 842 or TE 843) and (TE 807 and TE 845 and TE 848)

Instructional needs of struggling literacy learners. Multiple processes that contribute to proficient reading and writing. Difficulties related to specific reading and writing processes and/or to the orchestration of those processes. Developing and assessing vocabulary, comprehension, and composition skills.

## Assessing and Responding to Literacy Learning Difficulties II 854

Spring of even years. 3(3-0) P: TE 853 RB: TE 843

Identification of and response to instructional needs of struggling literacy learners. Collaboration in instructional planning and coordination across instructional settings, causes and correlates of reading difficulties.

### 855 **Teaching School Mathematics**

Fall. 3(3-0) RB: Two undergraduate mathematics courses.

Methods, materials, activities, and content important to teaching mathematics. Emphasis on conceptual understanding of mathematical ideas. Implications for lesson development, teaching diverse learners, and evaluating student learning.

## 857 **Teaching and Learning Mathematical**

Problem Solving Spring. 3(3-0) RB: Two undergraduate mathematics courses.

Alternative approaches to solving mathematical problems and incorporating problem solving into K-12 teaching. Selection, appraisal, and uses of problems in the classroom. Materials and assessment strategies.

### 860 Practice and Inquiry in Science Education Spring. 3(3-0)

Teaching science subjects. Emphasis on learner diversity, learning community, conceptual understanding, subject matter content, and learners' prior knowledge.

## 861A

Teaching Science for Understanding Spring. 3(3-0) RB: A teaching certificate with concentration in science teaching at elementary or secondary level. Enrollees should be teaching or otherwise have access to a classroom for the practical components of this course.

Responses to contemporary over-emphasis on memorization and coverage of content knowledge in science teaching. Theoretical knowledge, techniques, and practical skills necessary to teach science for understanding

### Inquiry, Nature of Science, and Science 861B Teaching

Fall. 3(3-0) RB: A teaching certificate with concentration in science teaching at elementary or secondary level. Enrollees should be teaching or otherwise have access to a classroom for the practical components of this course.

Inquiry and the nature of science as part of current science education reforms. Theoretical knowledge and practical skills for including inquiry and the nature of science in science instruction

## Teacher Education—TE

### 861C Action Research in K-12 Science and Mathematics Classrooms

Summer. 3(3-0) RB: A teaching certificate with concentration in science teaching at elementary or secondary level. Enrollees should be teaching or otherwise have access to a classroom for the practical components of this course.

Philosophy and methods supporting action research in sciences and mathematics classrooms. Design and implementation of an action research project in student's own setting. Analyzing, interpreting, and Reflection on study's reporting project results. value.

### 865 **Teaching and Learning K-12 Social** Studies

Fall. 3(3-0)

Purposes for teaching and learning social studies. Developing citizenship, social science reasoning, and content knowledge with diverse learners.

### 867 Perspectives in Social Studies: Global Education

Fall of odd years, Summer. 3(3-0) Issues affecting the global community. Educational strategies for developing a global perspective on human relationships and the environment.

## Curriculum Design, Development, and Deliberation in Schools 870

Fall, Spring, Summer. 3(3-0) P: (TE 807 or TE 808) and (TE 801 or TE 818)

Simulation in group curriculum deliberation. Critique of curriculum discourse, process, and product. Teachers' roles in site-based curriculum and staff development.

### 872 **Teachers as Teacher Educators**

Spring. 3(3-0) P: (TE 807 or TE 808) and (TE 801 or TE 818)

Experienced teachers' contributions to the professional development of novice teachers. Implications for school change.

### 873 Literacy Leadership

Spring. 3(3-0) RB: Nine credits in reading or language arts and classroom teaching experience.

Leadership roles for teachers in developing and improving literacy programs at preschool, K-12, college, and adult education levels. Assessing local needs in the context of national and state professional standards for literacy instruction. Maximizing use of resources. Evaluating programs and communicating evaluation results.

### 877 **Community Literacy**

Spring of even years. 3(3-0) Interdepartmental with Arts and Letters. Administered by Arts and Letters. R: Open only to doctoral students in the Rhetoric and Writing major or masters students in the Digital Rhetoric and Professional Writing major or graduate students in the Department of English or College of Education.

Applied research in a community organization, nonprofit agency, workplace, or school. Theories and designs of service learning pedagogies.

### 879 **Teaching College Mathematics**

Fall of even years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Counseling, Educational Psychology Special Education and Mathematics and and Mathematics Education. Administered by Mathematics Education. RB: Past or concurrent mathematics teaching experience. SA: SME 879

Curriculum materials, case studies, approaches to teaching and student learning of particular mathematics topics.

### 882 Seminars in Curriculum and Teaching

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

Intensive study of selected topics in curriculum and teaching

#### 883 Seminars in Literacy Instruction

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

Intensive study of selected topics in literacy instruction

### 890 Independent Study

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

Supervised individual study in an area of curriculum, teaching, or schooling.

### Special Topics in Teaching, Curriculum, 891 and Schooling

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 15 credits in all enrollments for this course.

Current special topics in various fields of teacher education.

#### 891A **Special Topics in Science Education**

Summer. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open to masters students or doctoral students.

Issues related to teaching K-12 school subjects to diverse learners

### 892 ESL/FL Classroom Practice: K-12 Literacy Instruction

Fall. 3(3-0) C: LLT 807 concurrently. Classroom management for the teaching of English as a second language and foreign languages in K-12 settings. Lesson planning and materials development. Adapting authentic materials. Microteaching.

### Laboratory and Field Experiences in 894 Teaching, Curriculum, and Schooling Fall, Spring, Summer. 1 to 6 credits. A stu-

dent may earn a maximum of 9 credits in all enrollments for this course.

Supervised graduate practica and internships in curriculum, teaching, and schooling.

#### 895 **Research Ethics**

Summer. 1(1-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Educational Administration and Kinesiology. Administered by Kinesiology. R: Open to graduate students. SA: PES 895

Identifying and resolving ethical problems in re-search. Collegial interactions. Authorship, publication, and reviewing practices. Data management. Ownership of data and intellectual property. Conflicts of interest. Protection of human and animal subjects. Lab safety and compliance.

### ESL/FL Practicum: K-12 896

Spring. 2(2-0) P: TE 892 Syllabus and lesson plan development for a fourweek field experience in English as a second language or foreign language K-12 setting.

#### 899 Master's Thesis Research

Fall, Spring, Summer. 2 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course.

Master's thesis research.

### Proseminar in Curriculum, Instruction, 901 and Teacher Education I

Fall. 3(3-0) R: Open to doctoral students in the Curriculum, Instruction and Teacher Education major and open to doctoral students in the Educational Policy major and open to doctoral students in the Mathematics Education major.

Purposes, history, structure, reform and conse-quences of the K-12 educational enterprise. Teaching practice, student learning, curricula, school organization, and educational policy. Theories and interpretations of educational systems. Schooling experiences of minority populations. Consideration of topics in and outside of the U.S.

### 902 Proseminar in Curriculum, Instruction, and Teacher Education II

Spring. 3(3-0) RB: TE 901 R: Open to doctoral students in the Curriculum, Instruction and Teacher Education major.

Two historical episodes related to improving teaching practice, teacher and student learning, curricula, and educational policy. Nature and effects of educational reforms.

### 904 ELL/ESL Research and Practice: K-12

Fall. 3(3-0) R: Open to doctoral students. Sociocultural and socio-political contexts for research in ELL/ESL teaching and learning; methods in ELL/ESL research; biliteracy/bilingualism, multiliteracies/mulitilingualism, and syncretic literacies; methods and curricula in second language teaching; identity, motivation, gender, race, and class; parent, school, and community partnerships for second language learners.

### 907 **Psychological Study of Teaching**

Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education. R: Open to doctoral students.

Research literature on psychological aspects of teachers and teaching. Topics include teacher's decision-making, learning from experience, and developmental changes

# 912 Reading Comprehension: Research and Theory

Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education. R: Open to doctoral students.

Theory and research on the development, teaching, and learning of reading comprehension birth through adulthood.

## 913 Psychology and Pedagogy of Mathematics

Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education. RB: CEP 902 R: Open to doctoral students.

Psychological theory and research on the learning of mathematics. Development of mathematical thinking and knowledge in school and other settings.

## 915 Literacy in Sociocultural Context

Fall of even years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education. R: Open to doctoral students.

The learning and development of literacy and the role of literacy in mediating cognition, affect, and action in educational contexts. Relationship between literacy and sociocultural contexts.

## 917 Contemporary Theories and Discourses in Education

Fall of even years. 3(3-0)

Logical positivism, interpretive theories, critical theory, feminist theory, poststructuralism and neopragmatism. Applications to curriculum, teaching, and educational policy.

## 918 Disciplinary Knowledge and School Subjects Spring. 3(3-0)

knowledge as represented in schools.

## 919 Policy Analysis in Education Fall. 3(3-0)

Conception, generation, and analysis of educational policies. Contexts such as governance levels, national setting, and legislative forms. Uses, limitations, and ethics of policy analysis.

## 920 Social Analysis of Educational Policy Spring. 3(3-0)

Social science perspectives on factors outside and inside school systems which shape policy and influence both the nature of policy problems and the form of educational solutions.

## 921 Learning to Teach Fall. 3(3-0)

Intellectual, practical, and moral dimensions of teaching and learning to teach. Impact of formal and informal influences on teachers' knowledge, skills, and attitudes.

## 922 Contexts and Micropolitics of Teacher Education

Spring of even years. 3(3-0) Historical and contemporary forms of teacher educa-

tion in relation to social and institutional contexts. Relation of traditional and innovative programs to basic tensions and issues in the field.

## 923 Comparative Perspectives on Curriculum, Instruction, and Teacher Education

Spring of odd years. 3(3-0) Contrasting national responses to universal questions. Links among education and other nationbuilding institutions. Organization and distribution of knowledge. Organization of, preparation for, and practice of teaching.

## 924 Philosophy of Education: Ideas and Methods Spring of even years. 3(3-0)

Selected ideas in education from different philosophical traditions. Issues of method, historical perspectives, and textual analysis.

## 926 Proseminar in Mathematics Education I

Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Mathematics and Mathematics Education. Administered by Mathematics Education. SA: SME 926

Research on the learning and teaching of mathematics. Focus on curriculum, discourse, equity and teacher education.

## 927 Proseminar in Mathematics Education II

Fall of even years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Mathematics and Mathematics Education. Administered by Mathematics Education. SA: SME 927

Research on the learning and teaching of mathematics. Focus on teaching, student learning, assessment and policy.

## 928 Proseminar in Educational Policy

Fall. 3(3-0) Interdepartmental with Educational Administration. Administered by Educational Administration.

Disciplinary perspectives on policy issues. Influence of research on policy process. Politics and educational practice as determinents of policy choice.

## 931 Introduction to Qualitative Methods in Educational Research

Fall, Spring, Summer. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Educational Administration. Administered by Teacher Education. RB: CEP 930

Concepts and assumptions underlying multiple traditions of qualitative research methods in education. Relationship between research questions and qualitative research design. Epistemology, methods, and ethical issues of ethnography, case study research, grounded theory, oral history and discourse analysis. Criteria for appraising and critiquing qualitative research designs, claims, and evidence,

## 934 Introduction to Quantitative Methods in Educational Research

Fall, Spring. 3(3-0) RB: CEP 930 Concepts and assumptions underlying quantitative research methods in education. Relationship between research questions and quantitative research design. Issues of inference, reliability, and validity. Application of statistical analysis to contemporary issues in education. Criteria for appraising and critiquing quantitative research designs, claims, and evidence. Quantitative research ethics.

## 936 Topics in Research on Teaching and Learning Science

Fall. 3 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: PhD student in Teacher Education or science related fields.

Research on teaching and learning in science. Teacher learning, student learning, and assessment of teaching and/or learning.

## 937 Topics in Social, Historical, Philosophical Foundations of Science Education

Spring of even years. 3 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

Foundations for research in science education. Diversity, social justice, and equity research and cognitive research, and the role of social, historical, and philosophical perspectives on framing research questions, methods and claims in these areas.

## 939 Special Topics in Advanced Qualitative Methodology

Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: TE 931

Special topics in advanced methods of qualitative research in education.

## 940 Curriculum Deliberation and Development

Fall of odd years. 3(3-0)

Research in curriculum deliberation and development. Discourse, group dynamics, processes, and outcomes for teaching and learning.

## 942 Economic Analysis in Educational Policy Making

Spring of even years. 3(3-0) Interdepartmental with Educational Administration. Administered by Educational Administration.

Economic effects of education. Economic analysis of policy issues in education. Alternative theoretical perspectives. Applications to the United States and other countries.

## 943 Seminar in Professional Development Spring of even years. 3(3-0)

Synthesis and application of knowledge acquired through consideration of research and field-based inquiry from teacher practice and change initiatives.

## 944 Seminar in English Education

Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to doctoral students.

Current issues in research, methods and policy in the field of English education.

## 945 Current Issues in Children's and Adolescent Literature

Spring of even years. 1 to 3 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to doctoral students.

Intensive study of current issues in writing, publishing, reading, teaching, and analyzing children's and adolescent literature.

## 946 Current Perspectives on Literacy Research and Instruction

Spring. 3(3-0) R: Open to doctoral students. Theoretical and empirical development in literacy research and instruction.

## 950 Mathematical Ways of Knowing

Spring of odd years. 3(3-0) RB: Two undergraduate mathematics courses.

Philosophical, cultural, political, societal, psychological, and historical perspectives on knowing in mathematics as a discipline.

## 954 Design and Methods in Mathematics Education Research

Fall. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Mathematics and Mathematics Education. Administered by Mathematics Education. RB: (MTHE 927) and at least one approved research methods course. SA: SME 954

History, current trends, and issues pertaining to research design and methods in mathematics education research. Mathematics education research in the areas of policy, teaching, teacher learning, and student learning with particular attention to how research design influence research findings.

### 958 History of Literacy Research and Instruction

Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Teacher Education. R: Open to doctoral students.

Key historical, political, scholarly, and educational issues influencing literacy curriculum and pedagogy.

## 959 Acquisition and Development of Language and Literacy Spring. 3(3-0) A student may earn a maxi-

Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Teacher Education. R: Open to doctoral students.

Language and literacy development with an alternating focus on early and middle childhood and adolescence and adulthood. Major areas of language and literacy development including phonology, orthography, morphology, semantics, syntax, and pragmatics. Connections between oral and written language development. Home and school influences on language and literacy development. Individual differences in language and literacy development.

## 961 Urban Politics, Education, and School Reform

Spring of even years. 3(3-0) R: Open to doctoral students.

Challenges cities face in initiating and sustaining meaningful education reform efforts.

### 962 Teachers and Teaching in Urban Contexts

Fall of even years. 3(3-0) R: Open to doctoral students.

Effective instruction and instructional support in urban settings.

## 963 Critical Race Theory in Education

Spring of even years. 3(3-0) R: Open to doctoral students.

Critical race theory as an analytical framework that provides race epistemology, methodological, and pedogogical approaches to study everyday inequalities in P-20 education.

## 970 Curriculum and Pedagogy in Teacher Education

Spring of even years. 3(3-0)

Teacher learning opportunities at the preservice, induction, and inservice levels. Intended and enacted curriculum, sources of pedagogy, and their impact on teachers' knowledge, skills, and attitudes.

## 971 Teacher Learning in School Settings Fall of odd years. 3(3-0)

Research about school-based learning by prospective, beginning, and experienced teachers. Observation, conversation, writing, and classroom research as tools for improving teaching.

## 975 Policy Perspectives on Teaching and Teacher Education

Fall of even years. 3(3-0)

Policy issues such as teacher accountability, teacher knowledge, and political influence.

## 980 Writing, Research, and Theory

Fall of even years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education. R: Open to doctoral students.

Theory and research on the development, teaching, and learning of writing, birth through adulthood.

## 982 Seminar in Curriculum, Instruction, and Teacher Education

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course.

Intensive study in an area of curriculum, teaching, and learning; educational policy and social analysis; or teacher education and teacher learning.

## 990 Independent Study

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to doctoral students.

Supervised individual study in an area of curriculum, instruction, and teacher education.

## 991 Special Topics in Curriculum,

Instruction, and Teacher Education Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

Special topics in the fields of curriculum, instruction, and teacher education.

### 991B Special Topics in Language and Literacy Education

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to doctoral students.

Special topics in language and literacy education.

## 994 Laboratory and Field Experience in Curriculum, Instruction, and Teacher Education

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to doctoral students. Approval of department.

Supervised practica, observations, and internships in an area of educational policy and social analysis, teacher education and teacher learning, and curriculum, teaching and learning.

## 995 Research Practicum in Curriculum, Instruction, and Teacher Education

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open to educational specialists or doctoral students in the Department of Teacher Education and open to students in the Educational Policy major.

Supervised research practicum. Design, execution, analysis, presentation, critique, and revision of research projects.

## 999 Doctoral Dissertation

Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 100 credits in all enrollments for this course. R: Open to doctoral students in the Curriculum, Instruction and Teacher Education major and open to doctoral students in the Educational Policy major.

Doctoral dissertation research.