613 Orthopedic Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 614) R: Open only to graduate-professional students in College of Human Medicine. Diagnosis and management skills in common orthopedic problems. Orthopedic emergencies.

614 Neurosurgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: SUR 608. R: Open only to graduate-professional students in College of Human Medicine. Problems related to common emergent and elective neurosurgery involving the brain, spine, and peripheral nerves. Neurological examinations, diagnostic methods.

615 Ophthalmology Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Medical and surgical treatment of eye diseases. Clinical experiences include private office practice, surgical observations, pre-and post-operative care.

616 Thoracic Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Problem solving in thoracic medicine and surgery. Pulmonary physiology. Diagnostic tools and tests, and indications for surgical procedures.

618 Anesthesia Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Common anesthetic agents. Performing anesthetic procedures under faculty supervision.

619 Sub-specialty Surgery Clerkship
Fall, Spring, Summer. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: (SUR 608) R: Open only to graduate-professional students in College of Human Medicine. Surgical domains not covered otherwise or in which students desire further exposure.

620 Senior Surgery Clerkship
Fall, Spring, Summer. 6 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (SUR 608 and MED 608) R: Open only to graduate-professional students in the College of Human Medicine. Understanding of the principles of various surgical specialties, critically ill patients, or enhanced exposure to ambulatory general surgery.

633 Extended Clinical Experience
Fall, Spring. Summer. 6(6-0) R: All six(6) campuses. Spring: All six(6) campuses. Summer: All six(6) campuses. P:M: (SUR 608 and MED 608) R: Open only to graduate-professional students in College of Human Medicine. Based in community hospitals and ambulatory sites, this is a 4 week clinical experience emphasizing interviewing skills, history, physical exam, problem solving and therapy.

637 Core Competencies III
Fall, Spring, Summer. 2(2-0) Fall: same as below. Spring: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. Summer: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Human Medicine; Family Practice; Medicine: Obstetrics, Gynecology and Reproductive Biology; Pediatrics and Human Development. Administered by College of Human Medicine. R: Open only to graduate-professional students in College of Human Medicine.

Core knowledge and skills from an interdisciplinary perspective.

801 Shock and Metabolism
Fall. 4(4-0) R: Open only to M.S. students in Surgery. Results of prolonged reduction in tissue perfusion on tissue metabolism, structure, and function at the systemic, cellular and subcellular levels. Pharmacologic interventions useful in volume resuscitation.

803 Enteral and Parenteral Nutrition
Fall, Summer. 3(3-0) R: Open only to M.S. students in Surgery. Identification of individuals requiring nutritional support. Nutritional requirements in diseases. Delivery of total parenteral and enteral nutrition. Special problems.

804 Research Design and Quantitative Techniques for Surgical Residents
Spring. 3(3-0) R: Open only to students in master's degree program in Surgery. Recognition and differentiation between experimental designs. Identification of strengths and weaknesses of a manuscript. Recognition and definition of statistical terms and common inferential techniques used in surgical research. Use of computer software in research.

890 Seminars in Research
Fall, Spring, Summer. 1 credit. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open only to M.S. students in Surgery. Philosophy and methods of research. Preparation and presentation of research data in research reports. Practical applications.

899 Master's Thesis Research
Fall, Spring, Summer. 3 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. RB: (SUR 801 and SUR 802 and SUR 803 and SUR 804) R: Open only to M.S. students in Surgery. Approval of department. Master's thesis research.

TEACHER EDUCATION

Department of Teacher Education
College of Education

120 Seminar in Integrated Science for Elementary Schools
Spring, 1(1-1) Interdepartmental with Science and Mathematics Education. Administered by College of Natural Science. P:M: (BS 110 or BS 111 or CEM 141 or PHY 231 or PSL 250 or GLG 201 or GED 203) R: Open only to students in the Integrated Science Teaching major, the Special Education major, the Child Development major, the Elementary Teacher Education program, the 5th-year teacher certification program, or approval of college. 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.

150 Reflections on Learning
Fall, Spring, Summer. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Students' experiences as learners in comparison to psychological, sociological, and anthropological theories and assumptions about learning and teaching in and out of school.

250 Human Diversity, Power, and 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 economic consequences for individuals and groups.

301 Learners and Learning in Context - Elementary (W)
Fall, Spring. Summer. 4(3-4) P:M: (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 elementary teacher certification program. Role of social context and sociocultural background in learning at the elementary level (K-5). 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.

302 Learners and Learning in Contexts – Secondary (W)
Fall, Spring. Summer. 4(3-4) P:M: (TE 150) and (TE 250 or CEP 240) 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.
311 Growing Up and Coming of Age in Three Societies (P)
Fall of odd years. 3(3-0) RB: One IAH course, one IIS course, completion of Tier I writing requirement. R: Not open to freshmen or sophomores. SA: TCC 305

320 Integrated Science for Elementary Schools
Spring. 3(2-2) Interdepartmental with Science and Mathematics Education. Administered by College of Natural Science. P:M: (SME 120) and (BS 110 or LBS 144 or LBS 148 H or BS 111 or LBS 145 or LBS 149 H or PSL 250 or ZOL 355) and (PHY 231 or LBS 231 or CEM 141 or LBS 171) and (GLG 201 or GEO 203 or AST 207) R: Open only to students in the Integrated Science teaching major. Not open to students with credit in SME 301.

348 Reading and Responding to Children's 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.

401 Teaching of Subject Matter to Diverse Learners—Elementary
Fall. 5(3-6) P:M: (MTH 201 and TE 301 and TE 348) and completion of Tier I writing requirement. RB: (MTH 202) R: Not open to freshmen or sophomores. Open only to students admitted to the elementary teacher certification program.
Examining teaching as enabling diverse learners at the elementary level (K-8) to inquire into and construct subject-specific meanings. Adapting subject matter to learner diversity. Exploring multiple ways diverse learners make sense of the curriculum.

402 Crafting Teaching Practice—Elementary (W)
Spring. 6(4-8) P:M: (TE 401) and completion of Tier I writing requirement. R: Not open to freshmen or sophomores. Open only to students admitted to the elementary 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). 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:M: (TE 407) and completion of Tier I writing requirement. R: Not open to freshman 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.

412 Integrated Science Research for Elementary Schools
Fall. 3(2-2) Interdepartmental with Science and Mathematics Education. Administered by College of Natural Science. P:M: (SME 320) and (STT 200 or STT 201) R: Open only to students in the Integrated Science teaching major.
Research design and data analysis of individual research projects relevant to the K-8 science curriculum. Integrating topics in life, earth, and physical science.

420 Reading and Responding to Children's 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.

491 Special Topics in Teacher Education
Fall. 3(3-0)
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.

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 School of Music. R: Open only to seniors in the Bachelor of Music Education major. Supervised music teaching experience in schools. On-campus seminar required.

501 Internship in Teaching Diverse Learners I
Fall. 6(2-24) P:M: (TE 402) 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 502B or CEP 502A or CEP 502D.
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.

502 Internship in Teaching Diverse Learners II
Spring. 6(2-24) P:M: (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 502B or CEP 502D or CEP 502D.
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:M: (TE 402) R: Open only to students admitted to 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:M: (TE 402) R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 802A or CEP 802B or CEP 802D.
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:M: (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 or CEP 803D.
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:M: (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 804A or CEP 804D.
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 Department of Counseling, Educational Psychology, and Special Education.
806 Learning Science with Technology
Spring. 3(3-0) Interdepartmental with
Counseling, Educational Psychology and
Special Education. Administered by De-
partment of Counseling, Educational Psy-
chology, and Special Education.
Possibilities, ideas, and issues associated with
learning science with technology. How K-12 teach-
ers use Internet resources (e.g., simulations, data-
bases, communities) to facilitate science learning.
Contemporary conceptual perspectives from educa-
tional psychology on important issues of learning.

807 Professional Development and Inquiry
Fall, Summer. 3(3-0) R: Open only to mas-
ters students in Curriculum and Teaching.
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) P.M: (TE 807)
R: Open only to masters students in Cur-
rriculum and Teaching.
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 even years. 3(3-0)
Social and intellectual history of educational ideas and
institutions. Legacies of reform initiatives. Evolu-
tion 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.

812 Sociological Inquiry into Education
Spring of even years. 3(3-0)
Relationships of educational organizations and
practices to social structures and institutions.

813 Education, Development and Social
Change
Spring of odd years. 3(3-0) Interdepartmen-
tial with Educational Administration. Admin-
istered by Department of Educational Ad-
ministration.
Rise of modern systems of education in developed and
developing countries. Education, the state, and
developmental. 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 prac-
tices.

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.

820 Power and Pluralism in School Practice
Spring of odd years. 3(3-0)
Connections between schools and diversity, inequal-
ity, and power in society. Genesis and conse-
quences of school policies for diverse learners.

821 Race and Educational Policy in the
United States
Spring of even years. 3(3-0)
Educational policy in relation to race in the United
States. Efforts to promote equity through racially
sensitive curricular and instructional practices.

822 Issues of Culture in Classroom and
Curriculum
Fall of odd years. 3(3-0)
Socio-cultural context and functions of schooling.
Cultural diversity in education. Schools and class-
rooms as cultural systems. Students cultural back-
grounds in relation to curriculum. Developing effec-
tive 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 class-
room diversity.

826 Evaluation of Educational Programs and
Policies
Spring. 3(3-0) Interdepartmental with
Counseling, Educational Psychology and
Special Education. Administered by De-
partment of Counseling, Educational Psy-
chology, and Special Education. RB: (CEP
822)
Qualitative and quantitative methods to assess the
effectiveness of public policies and resulting educa-
tional programs. Theory and practice of program
evaluation.

830 Designing Interdisciplinary Curricula
Spring of even years. 3(3-0)
Historical and conceptual analyses of ways to de-
sign, organize, and integrate curricula across sub-
ject 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 technolo-
gies in schools.

834 Reading Comprehension Instruction
Fall. 3(3-0) SA: TE 883C
Effectiveness of various approaches to reading
comprehension instruction. Influences of different
classroom contexts on reading comprehension
instruction.

835 Theory and Research on the Teaching of
Writing
Spring. 3(3-0) SA: TE 883D
Social, cognitive, and developmental perspectives on
teaching writing. Implications for curriculum and
instruction in middle and secondary schools.

836 Awards and Classics of Children's
Literature
Spring of even 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.

837 Issues and Trends in English Education
Fall. 3(3-0) R: Open only to master's stu-
dents in Literacy instruction and master's students in
Major trends in the development of English as a
school subject. Evolution of standards for English
instruction and conceptions of accomplished teach-
ning of English. Preparation of preliminary portfolio
to guide students program plan decisions.

840 Proseminar I: Historical Bases of
Literacy Instruction
Fall. 3(3-0) R: Open only to graduate stu-
dents in Literacy Instruction.
Relationships between language processes and
schooling.

841 Proseminar II: Psychological Bases of
Literacy Instruction
Spring. 3(3-0) RB: (TE 840) R: Open only to
graduate students in Literacy Instruction.
Psyehological foundations of literacy instruction,
including theories and models of reading and writ-
ing. Psychological processes, social and contextual
factors, and text features relevant to literacy instruc-
tion.

842 Advanced Methods of Elementary School
Reading
Fall, Summer. 3(3-0)
Methods and materials for teaching developmental and
content area reading in grades K-8.

843 Reading, Writing, and Reasoning in
Secondary School Subjects
Spring. 3(3-0)
Knowledge and methodology for teaching language,
literacy, and thinking in selected secondary school
subjects.

844 Classroom Literacy Assessment
Summer. 3(3-0)
Knowledge and methodology about ongoing and
summative types of classroom assessment in oral
language, reading, and writing at the elementary and
secondary levels.

845 Language Diversity and Literacy
Instruction
Fall. 3(3-0) RB: One introductory linguistics
course.
Acquisition of literacy in schools by language minor-
ity students and other learners with diverse back-
grounds.

847 Methods for Teaching Language Arts
Fall. 3(3-0)
Methods and materials for teaching listening, speak-
ing, reading, and writing with emphasis on language
development across the curriculum.
Teacher Education—TE

848  Methods of Writing Instruction  
Spring of even years. 3(3-0) RB: (TE 847)  
Rationale and methods for writing instruction from pre-writing through drafting and editing.

849  Methods and Materials for Teaching  
Children’s and Adolescent Literature  
Fall 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.

850  Critical Reading for Children and Adolescents  
Fall of even years. 3(3-0) P:M: (TE 849)  
Teaching and learning of critical and aesthetic responses 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.

852  Culture, Literacy, and Autobiography  
Fall of odd years. 3(3-0)  
Cultural foundations of literacy through autobiography. Individual and cultural identities, ethnicity, literacy, and education in literature and autobiographical sources.

853  Corrective and Remedial Literacy Instruction in the Classroom  
Fall. 3(3-0)  
Causes and correlates of individual differences in literacy abilities, especially among disabled readers and writers. Individualized reading diagnosis and corrective treatment plans and procedures for K-12 students and/or adult/alternative classes.

854  Clinical Literacy Instruction  
Spring of even years. 3(3-0) RB: (TE 843)  
Clinical applications of corrective and remedial assessment and instruction for individuals with severe complex literacy problems. Assessment and treatment for students and/or adults with severe and complex reading/literacy and reading/literacy related 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.

856  Alternatives in School Mathematics Curriculum  
Spring, Summer. 3(3-0) RB: Two undergraduate mathematics courses.  
Selection and appraisal of mathematics curricula. Uses of materials in the classroom. Representation of selected mathematical content for diverse learners.

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. Enrollies 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.

861B  Inquiry, Nature of Science, and Science Teaching  
Fall. 3(3-0) RB: A teaching certificate with concentration in science teaching at elementary or secondary level. Enrollies 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.

861C  Action Research in K-12 Science and Mathematics Classrooms  
Summer. 3(3-0) P:M: (TE 861A or concurrently or TE 861B) RB: A teaching certificate with concentration in science teaching at elementary or secondary level. Enrollies 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 reporting project results. Reflection on study’s value.

865  Teaching and Learning K-12 Social Studies  
Fall. 3(3-0)  
Developing citizenship, social science reasoning, and content knowledge with diverse learners.

866  K-12 Social Studies Curriculum  
Spring of odd years, 3(3-0)  
Issues and practices in social studies from historical, philosophical, and epistemological perspectives. Student diversity and the social studies curriculum. Reforms and needed research in social studies education.

867  Perspectives in Social Studies: Global Education  
Summer. 3(3-0)  
Issues affecting the global community. Educational strategies for developing a global perspective on human relationships and the environment.

868  Perspectives in Social Studies: Law-Related Education  
Summer. 3(3-0)  
Intellectual, social, and personal premises for law-related education. Strategies for curricular infusion.

870  Curriculum Design, Development, and Deliberation in Schools  
Fall, Spring, Summer. 3(3-0) P:M: (TE 807 and TE 808 and TE 818) R: Open only to master’s degree students in Curriculum and Teaching.  
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)  
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.

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 15 credits in all enrollments for this course.  
Supervised individual study in an area of curriculum, teaching, or schooling.

891  Special Topics in Teaching, Curriculum, 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.  

894  Laboratory and Field Experiences in Curriculum, Teaching, and Schooling  
Fall, Spring, Summer. 1 to 6 credits. A student 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 Kinesiology; Counseling, Educational Psychology and Special Education; Educational Administration. Administered by Department of Kinesiology. R: Open only to graduate students in the Department of Counseling, Educational Psychology and Special Education. Students in other departments may register with permission of advisor. SA: Department of Counselor Education.

Identifying and resolving ethical problems in research; including issues related to collegial interactions; authorship, publication, and reviewing practices; data management; ownership of data and intellectual property; conflicts of interest; protection of human and animal subjects; and lab safety and compliance.

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.

901 Proseminar in Curriculum, Teaching and Educational Policy I
Fall. 3(3-0) R: Open only to doctoral students in Curriculum, Teaching, and Educational Policy.

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

902 Proseminar in Curriculum, Teaching, and Educational Policy II
Spring. 3(3-0) RB: (TE 901) R: Open only to doctoral students in Curriculum, Teaching, and Educational Policy.

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

907 Psychological Study of Teaching
Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Department of Counseling, Educational Psychology, and Special Education. R: Open only to Ph.D. students in Education.

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

912 Psychological and Cognitive Aspects of Literacy Learning
Spring. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Department of Counseling, Educational Psychology, and Special Education. R: Open only to doctoral students in the College of Education.

Theory and research on psychological and cognitive aspects of literacy learning and use in sociocultural contexts.

913 Psychology and Pedagogy of Mathematics
Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Department of Counseling, Educational Psychology, and Special Education. R: (CEP 902) R: Open only to Ph.D. students in College of Education.

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

914 Learning Science with Technology: Theoretical Perspectives
Spring of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Department of Counseling, Educational Psychology, and Special Education.

Learning and teaching of science with the Internet and other technology-mediated environments and tools. Theories and research on the learning of science. Analysis of on-line and face-to-face science learning environments.

915 Literacy, Learning and Development in Sociocultural Context
Fall. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. Administered by Department of Counseling, Educational Psychology, and Special Education. R: Open only to doctoral students in the College of Education.

Role of language and literacy in mediating cognition, affect, and action in educational contexts. Relationship between oral and written discourse 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)
Cross-disciplinary comparisons of the nature of knowledge, its creation, refutation, and use. Correspondence between disciplinary knowledge and 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
Fall of odd years. 3(3-0)
Historical and contemporary forms of teacher education 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 Teaching, Curriculum, and Teacher Education
Spring of odd years. 3(3-0)

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.

928 Proseminar in Educational Policy
Fall. 3(3-0) Interdepartmental with Educational Administration. Administered by Department of Educational Administration.


931 Qualitative Methods in Educational Research
Fall, Spring, Summer. 4(4-0) Interdepartmental with Counseling, Educational Psychology and Special Education; Educational Administration. RB: (CEP 930)
Multiple traditions of qualitative research in education. Theory, research questions and design, data collection and analysis, and reporting. Ethical issues. Appraising qualitative research.

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 Department of Educational Administration.


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.

946 Current Issues in Literacy Research and Instruction
Spring. 3(3-0)
Current research trends in the psychological, social, and political dimensions of literacy and literacy instruction.

950 Mathematical Ways of Knowing
Fall of even years. 3(3-0) RB: Two undergraduate mathematics courses.
Philosophical, cultural, political, societal, psychological, and historical perspectives on knowing in mathematics as a discipline.