447-3 Fertilizers and Soil Fertility. (Same as Plant, Soil and Agricultural Systems 447) Recent trends in fertilizer use and the implications of soil fertility build up to sufficiency and/or toxicity levels; the behavior of fertilizer material in soils and factors important in ultimate plant uptake of the nutrients; the plant–essential elements in soils and ways of assessing their needs and additions; tailoring fertilizer for different uses and management systems; implication of excessive fertilization in our environment. Not for graduate credit. Special approval needed from the department.

448-2 Soil Fertility Evaluation. (Same as Plant, Soil and Agricultural Systems 448) A laboratory course designed to acquaint one with practical soil testing and plant analysis methods useful in evaluating soil fertility and plant needs. One hour lecture, two hours laboratory. Not for graduate credit. Special approval needed from the department. Lab fee: $15.

454-4 Soil Microbiology. (Same as MICR 454, Plant, Soil and Agricultural Systems 454) A study of microbial numbers, characteristics and biochemical activities of soil microorganisms with emphasis on transformations of organic compounds, nitrogen, phosphorus, sulfur, iron, and plant essential nutrients. Not for graduate credit. Prerequisite: CSEM 240 or Microbiology 301. Lab fee: $15.

455-3 Biology of Plant-Microbe Interactions. (Same as PSAS 455) The molecular basis of host-pathogen interactions and disease development in plants is examined with a critical review of original and current literature focusing on the mechanisms of pathogenesis, virulence, disease development and resistance, and response mechanisms in plants. Special approval needed from the department.

468-3 Weeds - Their Control. (Same as Plant, Soil and Agricultural Systems 468) Losses due to weeds, weed identification and distribution, methods of weed dissemination and reproduction, mechanical, biological, and chemical control of weeds. State and Federal legislation pertaining to weed control herbicides. Herbicide commercialization. Not for graduate credit. Special approval needed from the department. Field trips costing approximately $5.

Crop, Soil and Environmental Management Faculty
Bond, Jason, Associate Professor, Ph.D., Louisiana State University, 1999.
Chong, She Kong, Professor, Emeritus, Ph.D. University of Hawaii, 1979.
Cook, Rachel, Assistant Professor, Ph.D., North Carolina State University, 2012.
Elkins, Donald, Professor, Emeritus, Ph.D., Auburn University, 1967.
Fakhoury, Ahmad, Associate Professor, Ph.D., Purdue University, 2001.
Kantartzi, Stella, Assistant Professor, Ph.D., Aristotle University of Thessaloniki, 2006.
Klubek, Brian P., Professor and Chair, Ph.D., Utah State University, 1977.
Lightfoot, David A., Professor, Ph.D., University of Leeds, 1984.
McGuire, James M., Professor, Emeritus, Ph.D., North Carolina State University, 1961.
Meksem, Khalid, Professor, Ph.D., University of Cologne, 1995.

Olsen, Farrel J., Professor, Emeritus, Ph.D., Rutgers University, 1961.
Russin, John S., Professor, Emeritus, Ph.D., University of Kentucky, 1983.
Schmidt, Michael E., Associate Professor, Emeritus, Ph.D., Southern Illinois University, 1994.
Stucky, Donald J., Professor, Emeritus, Ph.D., Purdue University, 1963.
Tweedy, James A., Professor, Emeritus, Ph.D., Michigan State University, 1966.
Varsa, Edward C., Professor, Emeritus, Ph.D., Michigan State University, 1970.
Young, Bryan G., Professor, Ph.D., University of Illinois, 1998.

Curriculum and Instruction
(Department, Major, Minor [Child and Family Services], Courses, Faculty)

Early Childhood Major

EARLY CHILDHOOD MAJOR — PRESCHOOL/PRIMARY SPECIALIZATION

See TEP Supplement for requirements.

EARLY CHILDHOOD MAJOR — CHILD AND FAMILY SERVICES SPECIALIZATION

The child and family services specialization offers preparation leading to a variety of positions involving work with children and families in early childhood programs and social service agencies. Such positions may include: administrator and/or teacher in non-public school programs, including child care centers; child development specialist; infant-toddler teacher; family life specialist in social service agencies; specialist in parent education and family literacy; and parent liaison and family advocate.

There are sequential steps for advancement in the Child and Family Services specialization of the Early Childhood major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors that the faculty deem essential for competent and effective work with children and families. In order to assess mastery of these behaviors, students are evaluated on their performance in their courses and in the field.

An overall minimum GPA of 2.5 is required to register for the following major courses: Curriculum and Instruction 318A,B, 405A,B, 417, and 419. Students must earn a grade of C or better in CI 237 to enroll in 318A,B, and 405A,B. Curriculum and Instruction 245, 318A,B, 395, 405A,B, and 495 may not be taken more than two times, and students must have the consent of the department to repeat these courses.

To be eligible for the internship, the student must have attained a minimum GPA of 2.5 in the major, an overall GPA of 2.5, have completed Curriculum and Instruction 227, 237, 245, 317, 318A,B, 327, 337, 395, 404, and 405A,B with a grade of C or better, and have consent of the field experience instructor. A minimum of twelve semester hours of coursework from one of the recommended elective areas is also required prior to enrollment in the internship.
University Core Curriculum Requirements ................................. 41
   To include: Sociology 108; Psychology 102
Child and Family Specialization Requirements .......................... 53
   Health Education 351 ................................................................ 3
   Special Education 300 ............................................................. 3
Electives ...................................................................................... 26

Recommended for Early Childhood Program Director: The following 21 hours are required for the Illinois Director Credential: Curriculum and Instruction 418, 487; Accounting 216; English 291, Finance 270; Management 350; Social Work 383. Other recommended electives include Curriculum and Instruction 325, 421, 498H, 498Q; Psychology 303; Social Work 275.

Recommended for Child Development Specialist: Curriculum and Instruction 325, 403, 413, 498H; Rehabilitation 401, 407; Social Work 291, 275, 295, 361, 383; Special Education 425, 412, 405.

Recommended for Parent Educator: Curriculum and Instruction 325, 403, 413, 498H; Health Education 312; Psychology 306, 331; Sociology 302, 321; Social Work 275, 295, 383, 421; Special Education 425.

Recommended for Social Service Specialist: Curriculum and Instruction 498h; Psychology 301, 303, 331, 333; Speech Communication 201, 262, 383; Sociology 321, 340, 423; Women, Gender and Sexuality Studies 201, 341, 442.

Total ....................................................................................... 120

Early Childhood Education Child and Family Services Suggested Curricular Guide

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<th>FIRST YEAR</th>
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Elementary Education Major
See TEP Supplement for requirements.

Social Science Major
See TEP Supplement for requirements.

Child and Family Services Minor
The minor in child and family services is designed to provide students with basic knowledge in early childhood and family studies. The selection of coursework is flexible so that courses can be adapted to the special interests of students with diverse backgrounds and goals. Students are expected to honor all prerequisites in their selection of courses. A minimum of 18 hours of coursework is required as follows:

Curriculum and Instruction 227, 237 ............................................. 6
Electives to be chosen from the following: CI 245, 317, 327, 337, 390H, 390Q, 403, 404, 413, 419, 498H, 498Q .......................... 12

Courses (CI)

112-1 Strategic Reading Lab. The strategic reading lab assists students in mastering the strategies necessary to interact with and comprehend college text(s). The lab is taught in conjunction with ENGL 101 so that students can become more aware of their reading and writing behaviors. The lab focuses on strategies with text(s) and critical analysis of text(s).

120-3 Mathematics Content and Methods for the Elementary School I. (Same as Mathematics 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry.

199-1 Introduction to College Research. Use of resources such as the library, electronic databases, and the Internet in order to find, evaluate, and use information effectively, efficiently, and ethically. Students will learn to determine the extent of the information needed, as well as learn to use software tools to manage their research.

209-2 Philosophy of Creativity. The creative process in de-
developing child. Emphasis will be upon the levels, dimensions and individuality of creativity as it is manifested, observed and nurtured in preschool children.

213-2 Understanding the Elementary School Child. Child development concepts necessary for understanding the elementary child, with information provided on preschool, primary, and intermediate grade levels.


227-3 Marriage and Family Living. (Same as WGSS 286) [JAI Course: S7 902] A study of relationships and adjustments in family living, designed largely to help the individual. To help student better understand the recent changes that have occurred in marriage and the family in the United States.

237-3 Early Child Development I. This introductory course in child development surveys major milestones in children's social, emotional, physical, and intellectual development. Students are exposed to current developmental theories, as well as practices recommended for parents and teachers to support healthy development in children from infancy through the primary grades.

245-3 Professional Development Seminar. Introduction to early childhood with an emphasis on personal and professional development as preparation for work with children, parents, and professional peers. Acquaints students with the varied career options, approaches to programming, and professional personnel in working with children under eight. Some field trips will be taken.

258-1 to 4 Credit for Work Experience. This course includes work experiences relevant to the student’s major program, such as work in child care centers, teacher’s aid in public school, or with federal, state, or local agencies or programs that deal with children. Prerequisite: 12 semester hours completed with a grade of B or better in the student’s major area of concentration in the Curriculum and Instruction department and consent of Curriculum and Instruction Academic Affairs Committee.

313-4 Early Literacy Methods. This course focuses on the examination of factors and conditions that affect early and beginning reading from birth to eight years of age. Emphasis will be placed on the method, materials, organizational procedures, and assessment techniques in early literacy learning. In addition, students will participate in field experiences to apply the new knowledge they gain throughout the course. Early Childhood Education students must have concurrent enrollment in one semester hour of EDUC 213 to provide practical experience one day per week in a kindergarten setting. Prerequisite: CI 318A,B, CI 435 or concurrent enrollment. Concurrent enrollment in EDUC 213 required.

317-3 Guiding Play as a Learning Medium. Focuses on play as an integral part of child’s learning. Covers play theory and design of the learning environment. Emphasis on appropriate ways to guide children in their play activities and routines, and ways to develop creativity in children. Requires several independently scheduled observations of children’s play in the campus Child Development Laboratories.

318A-3 Instructional Methods for the Preschool Child. This class will prepare students to plan optimal learning environments for preschool children. Emphasis is placed on integrated learning and appropriate instructional methods in language, literacy, social studies, math and science. Students are required to have concurrent enrollment in CI 318B. Prerequisite: CI 237 (C or better), CI 245, CI 317; consent of the instructor required for non-early childhood majors or graduate students.

318B-1 Practicum in Instructional Methods for the Preschool Child. This practicum will prepare students to work in optimal learning environments for preschool children. Participation is one-half day per week for the semester at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in CI 318A. Prerequisite: CI 237 (C or better), CI 245, CI 317; consent of instructor required for non-early childhood majors or graduate students.


322-3 Mathematics Content and Methods for the Elementary School IV. (Same as MATH 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in CI 321 or Mathematics 321.
and group management strategies appropriate for Kindergarten through third grade classrooms. They will develop professional leadership and collaboration skills and apply professional standards to analyze and reflect on their work. Prerequisite: admission to the Teacher Education Program, CI 318 or concurrent enrollment in CI 318, or consent of instructor.

325-3 Young Children and the Arts. The development of creativity in young children. Methods and curriculum that foster creativity in graphic expression, music and creative movement among preschool and primary school children. Special approval needed from the instructor.

327-3 Family Studies. Study of changes in family living throughout the family life cycle. Insights into common current family problems typical of each stage of the family life cycle. Prerequisite: CI 227.

337-3 Early Child Development II. An in-depth look at theories of early childhood development, ages 3 to 8 years, with an introduction to assessment and observation of children ages 3 to 8 years. Prerequisite: CI 237.

360-3 Teaching Reading and Writing in the Secondary Content Areas. State and national standards for teachers require that teachers know and demonstrate a wide range of literacy methods and skills to promote effective and appropriate classroom communication. This course provides teachers with the knowledge and skills to teach reading and writing in the secondary content areas. Restricted to admission to the Teacher Education Program or consent of instructor.

390A-1 to 3 Readings-Curriculum. In-depth reading in various areas of education as related to the field of curriculum. Special approval needed from the instructor.

390B-1 to 3 Readings-Supervision for Instructional Improvement. In-depth reading in various areas of education as related to the field of supervision for instructional improvement. Special approval needed from the instructor.

390C-1 to 3 Readings-Language Arts. In-depth reading in various areas of education as related to the field of language arts. Special approval needed from the instructor.

390D-1 to 3 Readings-Science. In-depth reading in various areas of education as related to the field of science. Special approval needed from the instructor.

390E-1 to 3 Readings-Mathematics. In-depth reading in various areas of education as related to the field of mathematics. Special approval needed from the instructor.

390F-1 to 3 Readings-Reading. In-depth reading in various areas of education as related to the field of reading. Special approval needed from the instructor.

390G-1 to 3 Readings-Social Studies. In-depth reading in various areas of education as related to the field of social studies. Special approval needed from the instructor.

390H-1 to 3 Readings-Early Childhood Education. In-depth reading in various areas of education as related to the field of early childhood education. Special approval needed from the instructor.

390I-1 to 3 Readings-Elementary Education. In-depth reading in various areas of education as related to the field of elementary education. Special approval needed from the instructor.

390J-1 to 3 Readings-Middle School. In-depth reading in various areas of education as related to the field of middle school. Special approval needed from the instructor.

390M-1 to 3 Readings-Instruction. In-depth reading in various areas of education as related to the field of instruction. Special approval needed from the instructor.

390N-1 to 3 Readings-Educational Media. In-depth reading in various areas of education as related to the field of educational media. Special approval needed from the instructor.

390O-1 to 3 Readings-Environmental Education. In-depth reading in various areas of education as related to the field of environmental education. Special approval needed from the instructor.

390P-1 to 3 Readings-Children’s Literature. In-depth reading in various areas of education as related to the field of children’s literature. Special approval needed from the instructor.

393A-1 to 6 Individual Research in Education-Curriculum. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393B-1 to 6 Individual Research in Education-Supervision for Instructional Improvement. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393C-1 to 6 Individual Research in Education-Language Arts. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393D-1 to 6 Individual Research in Education-Science. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393E-1 to 6 Individual Research in Education-Mathematics. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393F-1 to 6 Individual Research in Education-Reading. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393G-1 to 6 Individual Research in Education-Social Studies. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.

393H-1 to 6 Individual Research in Education-Early Childhood Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor’s degree. Special approval needed from the instructor.
393I-1 to 6 Individual Research in Education-Elementary Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393J-1 to 6 Individual Research in Education-The Middle School-Junior High School. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393M-1 to 6 Individual Research in Education-Instruction. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393N-1 to 6 Individual Research in Education-Educational Media. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393O-1 to 6 Individual Research in Education-Environmental Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393Q-1 to 6 Individual Research in Education-Family Studies. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

395-3 Field Observation. This course focuses on the development of professional skills in work with young children and families and the exploration of career opportunities within Child and Family Services. Students will participate in practical experiences in social service agencies and early childhood programs, completing two 7-week half-day practicum experiences in different community settings. Prerequisite: CI 245 or equivalent. Restricted to the major.

400-3 Social and Informal Learning. Covers games, simulations, role-playing, discussion forums, and social networking as informal modes of learning in both education and training contexts. Both face-to-face and online aspects of social and informal learning are considered.

401-6 (3,3) Designing Digital Games and Simulations. This course focuses on the design and development of simulated environments (such as digital games and virtual worlds) and how they may be used for the delivery of online learning and instruction. The production process will focus on the use of suitable technologies and game development toolkits to create immediately usable prototypes for learning showcases.

402-3 The Study of Cultural Diversity in Education and Family Services. The student examines origins, characteristics of behavior, learning patterns, family constellations, and lifestyles of the diverse cultural groups in our community, state, and nation. Students will identify their own cultural background and biases; recognize diversity resulting from ethnic origin, gender, age, or disability; and experience ways of learning about cultures other than their own that promote constructive communication and integration into all aspects of schooling, teaching, and family services.

403-3 Child Abuse and Neglect. Examines the many facets of child abuse and neglect. Emphasis is on current research in the field, as well as the roles and responsibilities of various professionals who work with children and their families.

404-3 Infant Development. Current theories and knowledge concerning growth and development of infants with related laboratory field observations. Prerequisite: CI 237 or Psychology 301 or equivalent.

405A-2 Methodologies For Group Care of Infants and Toddlers. Students will develop competencies and skills needed by early childhood professionals for work with children up to the age of three in an inclusive group care situation. Emphasis is on planning developmentally appropriate curriculum and assessment and stimulating environments for infants and toddlers. Students are required to have concurrent enrollment in CI 405B. Prerequisite: CI 237 (C or better), CI 318A, CI 318B, CI 404.

405B-2 Practicum in Methodologies for Group Care of Infants and Toddlers. This practicum will prepare students to work in optimal learning environments for infants and toddlers. Participation is four hours per week (fall and spring) and eight hours per week (summer) at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in CI 405A. Prerequisite: CI 237 (C or better), CI 318A, CI 318B, CI 404.

406-3 Foundations of Learning Systems Design & Technology. This course provides students with an overview of the issues related to learning systems design and technology (formerly, instructional design and technology). It covers historical foundations, trends, current practice, and future directions of the field and provides students with the context of the courses in the concentration.

407C-3 Diagnostic Teaching Strategies for Classroom Teachers-Language Arts. Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: Curriculum and Instruction 423 or consent of instructor.

407E-3 Diagnostic Teaching Strategies for Classroom Teachers-Mathematics. Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: Curriculum and Instruction 423 or consent of instructor.

407F-3 Diagnostic Teaching Strategies for Classroom Teachers-Reading. Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: Curriculum and Instruction 423 or consent of instructor.

408-3 Current Issues in Early Intervention. This course will examine developmental ecology of early intervention and the dynamic processes by which children and their environments interact. A comprehensive overview of the knowledge base and critical assessment and implementation strategies of early childhood intervention along with intervention models and appropriate practice will be covered. Prerequisites: CI
237, SPED 405 or consent of instructor.

409-3 Creative Teaching. To assist pre- and in-service teachers in acquiring methods and materials that will improve instruction in the public school classroom, with special attention to the characteristics and needs of students. Prerequisite: Education 316 or consent of instructor.

410-2 Creative Writing in the Public School. Techniques of encouraging creative writings in the schools.

412C-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Language Arts. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412D-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Science. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412E-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Mathematics. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412F-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Reading. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412G-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Social Studies. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

413-3 Language Development of the Young Child, 0-8. The normal language development and communication skills of the young child will be the focus of this course; attention will be given to an integrated, holistic philosophy toward development and learning in young children ages 0-8. Specifically focusing upon social and environmental influences on the development of language and literacy, students will observe, listen, record, and analyze samples of young children’s communication. Prerequisite: CI 237 or Psychology 301 or graduate standing.

415-3 Modern Approaches to Teaching Middle School Mathematics (Grades 4-8). Examines current mathematics materials and teaching approaches. Hands-on experience with a multitude of teaching aids including microcomputers and problem solving materials. Student exchange of ideas and discussion of activities for classroom use. Prerequisite: CI 322 and an overall GPA of at least 2.75.

417-3 Administration of Early Childhood and Family Programs. This course introduces students to the planning, organizing and daily management of programs serving young children and their families. Topics will include funding/budgeting, staffing, programming, and evaluation. Prerequisite: CI 318.

418-3 History and Philosophy of Early Childhood Education. A survey of the history and philosophies of early childhood education with implications for current program practices. Students analysis their personal philosophy of early childhood education. Prerequisite: CI 318; or consent of instructor for graduate students. Restricted to senior or graduate standing.

419-3 Child, Family and Community Involvement. This course is designed to provide students with the knowledge and skills needed to work successfully with parents and parent groups in individual and community settings. The focus will be on strengthening adult-child relationships and parent-staff relationships in home, school and community settings. Parent involvement in early childhood programs and parent education will be stressed. Prerequisite: CI 227 and 318 or concurrent enrollment in 318; or consent of instructor for non-early childhood majors or graduate students.

420-3 Adult Literacy Strategies. The focus is on understanding the problems of the individual whose literacy level does not permit full participation in economic, social, family and civic opportunities. Emphasis is placed on developing strategies to support and strengthen adult literacy skills.

421-3 Building Family Literacy Programs. This course will provide an in-depth look at family literacy. Emphasis is on the history and foundations of family literacy, related research, program models, programming, evaluation and funding. Designed for both the experienced and the developing family literacy professional. Prerequisite: CI 419.

422-3 Teaching Reading in the Elementary School. (Same as Special Education 422) Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Prerequisite: for Elementary Education majors, grade C or better in CI 321, 435 and Education 313 or consent of instructor; for Special Education majors, admission to the Teacher Education Program. Note: Elementary Education majors must take CI 423 and EDUC 322 concurrently with this class.

423-3 Teaching Elementary School English Language Arts. Oral and written communication processes with emphasis on the structure and process of the English language arts in the elementary school. Specific attention to the fundamentals of spoken English, writing, spelling, and listening. Study of learning materials, specialized equipment and resources. Prerequisite: Speech Communication 101 or equivalent, C or better in Curriculum and Instruction 321 and 435, or consent of the instructor. Note: Elementary Education majors must take CI 423 and EDUC 322 concurrently with this class.

424-3 Teaching Elementary School Social Science. Emphasis on the structure and process of teaching social science in the elementary school setting. Specific attention to the fundamentals of developing social science objectives, planning units, developing a general teaching model, organizing the curriculum, and evaluating behavioral change. Study of learning materials, specialized equipment and resources. Prerequisite: grade of C or better in CI 422, 423 and 426, or consent of instructor.

426-3 Introduction to Teaching Elementary School Science. Content and methods of elementary school science, grades K-8. Emphasis on materials and strategies for effective science education. One or more field trips. Prerequisites: grade of C or better in CI 321, CI 435, SCI 210A, and SCI 210B, or equivalent.
427-3 Science Process and Concepts for Teachers. Specifically designed to develop those cognitive processes and concepts needed by elementary school teachers in the teaching of modern science programs. Prerequisite: grade of C or better in CI 422, CI 423, CI 426, SCI 210A, and SCI 210B, or equivalent.

428-3 Inquiry Skills for Teaching Junior and Senior High School Science. The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations.

429-3 Instructional Methods for the Primary Child: Social Studies and Science. Emphasis on creating optimum learning environments, planning for instruction, models of teaching, integrated learning and appropriate instructional methods in science and social studies, grades 1-3. Early childhood certification students must have concurrent enrollment in EDUC 329 to provide practical experience one-half day per week. Concurrent enrollment in CI 430 required. Prerequisites: CI 318, CI 324, or consent of instructor.

430-3 Instructional Strategies for the Primary Child: Mathematics. Emphasis on creating optimum learning environments, integrated learning and appropriate instructional methods in the content area of mathematics, grades 1-3. Early childhood certification students must have concurrent enrollment in EDUC 329 to provide practical experience one-half day per week. Concurrent enrollment in CI 429 required. Prerequisite: CI 318, CI 324, or consent of instructor.

435-3 Literature for Children and Early Adolescents. Studies types of literature; analysis of literary qualities; selection and presentation of books and other media for children and early adolescents; and integration of literature in preschool, elementary and middle school and library settings. Prerequisite: admission to the Teacher Education Program, C or better in English 101 and 102, and overall GPA of 2.75; or consent of instructor. Lab fee: $10.

437-3 Instructional and Human Performance Technology. For those persons interested in the role that learning systems and instructional design and technology play in the field of human performance technology. Emphasis is upon performance problem identification, the distinction between skill/knowledge deficits and other performance problems, and the rationale for instructional solutions as well as electronic performance support systems, feedback and incentives, certification and other HP technologies.

441-3 Multicultural Literature for Children. Identification, selection and evaluation of books and audiovisual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans. Prerequisite: CI 435 or consent.

445-3 Literature for Young Adults. The selection and use of books and other educational media for students in the junior high and senior high school.

452-3 Digital Video Production. Video has become an essential aspect of teaching, training, and communications. This course is an intensive workshop that provides a thorough understanding of video formats, video production, and video editing techniques. No previous experience with video production is required. Lab fee: $20.

455-3 Design and Delivery of e-Learning. Investigates e-learning in both higher education and corporate training contexts. The course draws upon the tradition of distance education in covering the design, delivery, and evaluation of online and blended learning in higher education. The course also draws upon the tradition of computer-based training (CBT) in covering the design, delivery, and evaluation of web-delivered training in corporations and organizations. Lab fee: $20.

458-3 Classroom Teaching with Television. Classroom utilization of open and closed circuit television. Emphasis is placed on the changed role of the classroom teacher who uses television. Evaluation of programming, technicalities of ETV, and definition of responsibilities are included. Demonstration and a tour of production facilities are provided.

460-3 Teaching Reading and Writing in the Middle Grades. Familiarizes middle grade teachers with issues relevant to instruction in literacy skills essential to learning in any subject area. Students will demonstrate personal competency relevant to these skills and understanding of strategies for identifying problems and developing literacy competencies in young adolescents. Prerequisite: Curriculum and Instruction 422 (for elementary majors), CI 360 (for secondary majors), or consent of instructor.

462-3 Middle and Junior High School Programs. Focuses on the development of middle and junior high school curriculum and the identification of instructional activities for early adolescents. Emphasis is placed on development of literary strategies, developmentally appropriate teaching strategies, interdisciplinary unit planning, teaming, and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: Education 313 or consent of instructor.

463-3 Meeting the Social and Emotional Needs of Gifted Children. Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. This course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will cover particular curriculum and instruction strategies designed for this population and will emphasize strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: CI 467 or consent of instructor.

464-3 Student Activities. Analysis of extra-class activities and programs in public schools with a focus on the status, trends, organization, administration, and problems.

465-3 Advanced Teaching Methods. The focus is on a variety of teaching methods and strategies which are appropriate for secondary and/or post-secondary educators. Individual and group methods are emphasized.

466-3 Documenting Accomplished Teaching. This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS) certification process. As a part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work.

467-3 Methods and Materials in the Education of the Gifted. Content focused on the most appropriate instructional strategies and materials to be utilized with the gifted. Time
spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students.

468-3 Science Methods for Middle and Senior High Schools. A performance-based approach to instructional skills common to teaching natural science at the middle and senior high school levels. Three class hours and one micro teaching laboratory per week.

469-3 Teaching Social Sciences in the Secondary School. Emphasis is placed on the analysis and evaluation of the social sciences with focus on instructional strategies and curricular designs in the teaching of history, geography, political science, economics, and sociology. Prerequisite: Education 313 or consent of instructor.

470-3 Advanced Secondary Social Science Teaching Methods. This course will help students develop instructional materials and curricular designs for history and social science classrooms at the secondary level. Students will have an opportunity to gather, analyze, corroborate, and synthesize sources and data for research they can then incorporate in their own classroom. Integrating technology in instruction and assessment will also be emphasized. Prerequisite: CI 469.

473-3 Teaching in Middle Level Schools. Acquaints students with issues of teaching young adolescents and the role of teachers in connecting schools with community resources. Information from current area specialists and exemplary practitioners extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development related to the curriculum. Prerequisite: CI 462, EDUC 313, or consent of instructor. Lab fee: $10.

482-3 Web Applications for Teachers. Investigates use of the Internet in classroom instruction and for professional development. Focus is on the “4 Cs” of Internet use by teachers: Communication, Content, Collaboration, and Community. Lab fee: $20.

483A-3 Instructional Applications for Microcomputers. A study of the development and use of microcomputers systems in educational settings. Emphasis is upon the characteristics, capabilities, applications, and implications of microcomputers and microcomputer lessons, with case studies of their integration into the teaching, learning process.

483B-3 Instructional Applications for Microcomputers. A study of the development and use of microcomputers systems in educational settings. Emphasis is upon the characteristics, capabilities, applications, and implications of microcomputers and microcomputer lessons, with case studies of their integration into the teaching, learning process. Prerequisite: CI 483A.

484-3 Interactive Multimedia for Learning. An introduction to the evaluation, design, and development of interactive instructional multimedia programs. The instructional methods of Tutorial, Drill, Simulation, and Educational Games are covered. Projects include designing, developing, and use-testing an interactive instructional multimedia program. Lab fee: $20.

486A-3 Instructional Development Studio I. The “Learning Studio” environment provides students with the opportunity to learn and use authoring systems, languages and product development tools to design, develop and produce online resources for learning and instruction. Participants will showcase learning artifacts created using a variety of commercial productivity tools and creativity suites. Prerequisite: basic web design skills. Special approval needed from the instructor. Lab fee: $20.

486B-3 Instructional Development Studio II. The “Learning Studio” environment provides students with the opportunity to learn and use authoring systems, languages and product development tools to design, develop and produce online resources for learning and instruction. Participants will showcase learning artifacts created using a variety of commercial productivity tools and creativity suites. Prerequisite: basic web design skills. Special approval needed from the instructor. Lab fee: $20.

487-3 Web-based Applications for Teachers and Instructors. Survey of trends and developments and laboratory instruction in the use of Web-based applications representative of those used by teachers, education specialists, or instructors in educational settings. An emphasis is placed upon developing skills used by teachers, education specialists, or instructors which enhance and facilitate the education processes within a Web-based learning environment. Laboratory fee: $20.

495-2 to 8 Field Experience. Supervised learning experiences in settings for children and families and public agencies. Prerequisite: CI 318, 405. Special approval needed from the instructor.

496-2 to 6 (2 to 4 per semester) Field Study Abroad. Orientation and study before travel, readings, reports, and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term is 4.

498A-1 to 15 (1 to 3 per topic) Workshops in Education-Curriculum. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498B-1 to 15 (1 to 3 per topic) Workshops in Education-Supervision for Instructional Improvement. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498C-1 to 15 (1 to 3 per topic) Workshops in Education-Language Arts. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498D-1 to 15 (1 to 3 per topic) Workshops in Education-Science. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours
toward a master's degree. Special approval needed from the instructor.

498E-1 to 15 (1 to 3 per topic) Workshops in Education-Mathematics. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498F-1 to 15 (1 to 3 per topic) Workshops in Education-Reading. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498G-1 to 15 (1 to 3 per topic) Workshops in Education-Social Studies. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498H-1 to 15 (1 to 3 per topic) Workshops in Education-Elementary Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498I-1 to 15 (1 to 3 per topic) Workshops in Education-The Middle School. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498J-1 to 15 (1 to 3 per topic) Workshops in Education-Secondary Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498K-1 to 15 (1 to 3 per topic) Workshops in Education-Gifted and Talented Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498L-1 to 15 (1 to 3 per topic) Workshops in Education-School Library Media. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498M-1 to 15 (1 to 3 per topic) Workshops in Education-Instruction. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498N-1 to 15 (1 to 3 per topic) Workshops in Education-Educational Technology. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498O-1 to 15 (1 to 3 per topic) Workshops in Education-Environmental Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498P-1 to 15 (1 to 3 per topic) Workshops in Education-Children's Literature. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498Q-1 to 15 (1 to 3 per topic) Workshops in Education-Family Studies. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498R-1 to 15 (1 to 3 per topic) Workshops in Education-Computer Based Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498S-1 to 15 (1 to 3 per topic) Workshops in Education-Gifted and Talented Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.
systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498T—1 to 15 (1 to 3 per topic) Workshops in Education-Teacher Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

Curriculum and Instruction Faculty

Barrette, Pierre, Associate Professor, Emeritus, Ed.D., University of Massachusetts, 1971.
Bauner, Ruth E., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1978.
Becker, Jerry P., Professor, Ph.D., Stanford University, 1967.
Bu, Lingguo, Assistant Professor, Ph.D., Florida State University, 2008.
Buser, Margaret, Assistant Professor, Emerita, M.S.Ed., Indiana University, 1966.
Campbell, James A., Associate Professor, Emeritus, Ph.D., Ohio State University, 1978.
Copenhaver, Ron W., Associate Professor, Emeritus, Ed.D., Indiana University, 1978.
Coscarelli, William, Professor, Emeritus, Ph.D., Indiana University, 1977.
Dixon, Billy G., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1967.
Eddleman, E. Jacqueline, Associate Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1970.
Eichholz, Barbara, Lecturer, Emerita, Ph.D., Southern Illinois University Carbondale, 1986.
Erickson, Lawrence, Professor, Emeritus, Ph.D., University of Wisconsin, 1972.
Fadde, Peter J., Associate Professor, Ph.D., Purdue University, 2002.
Gilbert, Sharon, Associate Professor, Emerita, Ph.D., Ohio State University, 1988.
Glassett, Kelly, Assistant Professor, Ph.D., University of Utah, 2007.

Jackson, James, Associate Professor, Emeritus, Ph.D., University of Wisconsin, 1976.
Johnson, Margaret, Lecturer, Emerita, Ph.D., Southern Illinois University, 1998.
Jones, Dan R., Associate Professor, Emeritus, Ed.D., Indiana University, 1978.
Jones, Jennie Y., Assistant Professor, Emerita, A.M., University of Illinois, 1949.
Karmos, Ann, Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1975.
Killian, Joyce E., Professor, Emerita, Ph.D., Pennsylvania State University, 1980.
Lamb, Morris L., Associate Professor, Emeritus, Ed.D., University of Oklahoma, 1970.
Lin, Cheng-Yao, Associate Professor, Ph.D., University of Illinois, 2003.
Loh, Sebastian, Associate Professor, Ph.D., University of Georgia, 2004.
Matthias, Margaret, Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1972.
McIntyre, Christina, Assistant Professor, Ph.D., Georgia State University, 2007.
Miller, Grant, Assistant Professor, Ph.D., Boston College, 2007.
Moghareban, Catherine N., Associate Professor, Ph.D., Southern Illinois University Carbondale, 1990.
Moore, Eryn E., Assistant Professor, Emerita, Ph.D., Southern Illinois University Carbondale, 1976.
Mumba, Frackson, Associate Professor, Ed.D., Illinois State University, 2005.
Nelson, JoAnn, Assistant Professor, Emerita, Ph.D., University of Illinois, 1980.
Pearlman, Susan F., Associate Professor, Emerita, Ph.D., University of Missouri, 1987.
Post, Donna M., Associate Professor, Ph.D., Pennsylvania State University, 1990.
Pultorak, Edward, Jr., Professor, Ph.D., Indiana State University, 1988.
Shafer, Frances K., Senior Lecturer, Ph.D., Southern Illinois University, 2008.
Shelby-Caffey, Crystal V., Assistant Professor, Ph.D., Southern Illinois University, 2008.
Shepherd, Terry R., Associate Professor, Emeritus, Ph.D., University of Illinois, 1971.
Shrock, Sharon A., Professor, Emerita, Ph.D., Indiana University, 1979.
Smith, Lynn C., Associate Professor, Emerita, Ph.D., University of Georgia, 1984.
The Department of Curriculum and Instruction offers three graduate degree programs: the Master of Science in Education (M.S.), The Master of Arts in Teaching (M.A.T.), and the Doctor of Philosophy in Education (Ph.D.). Candidates for the M.A.T. must select the secondary education specialty area and an area of concentration. Upon graduation from the program, M.A.T. students are eligible for certification to areas in Curriculum and Instruction or the concentration in Learning Systems Design and Technology. Candidates for the M.A.T. must select the secondary education specialty area and an area of concentration. Upon graduation from the program, M.A.T. students are eligible for certification to
teach only in grades 9-12 unless they have met the middle school endorsement requirements. Those who already possess a bachelor’s degree in education are ineligible for the M.A.T. program. Those pursuing the Ph.D. must select from a specialty area in curriculum and instruction, early childhood, elementary education, instructional technology, middle level education, mathematics education, reading and language studies, science education, social science education, or teacher leadership.

The Department also offers State of Illinois endorsements as middle level educators (grades 6-9), reading teachers, and K-12 reading specialists. Endorsement opportunities are available to M.S. and Ph.D. candidates as part of their specialty area preparation; M.A.T. candidates earn the middle level endorsement after completion of requirements for the degree. Endorsements in specific secondary level courses (e.g., chemistry, physics, and psychology) are also available. All such endorsements are arranged through the state and may require additional course work as well as a state-level transcript analysis.

Admission. Applicants for graduate programs must submit admission forms for both the Graduate School and the Department of Curriculum and Instruction. General requirements for admission to graduate programs are described in Chapter 1 of this catalog; additional requirements for the M.A.T. program are explained in the section that follows. In all cases, a selection and review committee screens applicants on the basis of prior undergraduate and graduate work, grade point average, as well as standardized test scores, work experience, and letters of recommendation as needed. The committee may recommend admission for candidates with specific academic deficiencies if, in its opinion, a candidate’s application materials demonstrate unusual professional promise.

Application materials may be obtained by addressing a request to: Coordinator of Graduate Studies, Department of Curriculum and Instruction, Mail Code 4610, Southern Illinois University, 625 Wham Drive, Carbondale, IL 62901. Specific information may be obtained by calling 618-536-2441 or by e-mailing currinst@siu.edu. All programs require a nonrefundable $50.00 application fee that must be submitted with the application for Admission to Graduate Study in Curriculum and Instruction. Applicants may pay this fee by credit card if applying electronically. Applicants submitting a paper application must pay by personal check, cashier’s check, or money order made out to SIU, and payable to a U.S. Bank.

Master of Arts in Teaching Degree

SIU’s Master of Arts in Teaching (M.A.T.) program is an alternative certification and degree program intended for persons who have successfully completed an undergraduate degree (Bachelor of Arts, Bachelor of Science, or Bachelor of Fine Arts) in the liberal arts or sciences and desire to pursue licensure for teaching at the secondary school level. Those enrolled engage in a year-long internship (two semesters) in a public school setting while also completing university-based studies culminating in the Master’s degree. The M.A.T. is designed as a high-quality, technology-rich, accelerated teacher certification program; time-to-degree is approximately fifteen (15) months, including one full academic year and two adjacent or contiguous summer sessions of course work. Those holding undergraduate degrees in teacher education are ineligible for this program.

M.A.T. candidates select an area of concentration most compatible with coursework in the major content area that was completed during a bachelor’s degree program. Area of concentration options include:

- Agriculture (General)
- Art
- Biological Sciences
- Business
- English
- Family & Consumer Science
- French
- Health
- History
- Mathematics
- Physical Education
- Social Science
- Spanish

Upon graduation from the program, candidates will be certified to teach in a school system in Illinois or in a state offering reciprocity. They will be broadly prepared in their content areas and will possess leadership experience pertinent to the public school setting. M.A.T. candidates advance through the program as members of an interdisciplinary cohort of no more than 25 students and are required to work collaboratively within that cohort to investigate and make recommendations about school-based programs and issues using action research methodologies.

Admission. Admission to the M.A.T. program is highly competitive. Applicants with undergraduate content area backgrounds currently experiencing national teacher shortages will receive priority in admission decisions, but other applicants meeting admission requirements will be considered. In addition to materials required for general admission to the Department and the Graduate School, M.A.T. applicants must submit: (1) a résumé; (2) original letters of reference from two persons familiar with the candidate’s undergraduate performance or who can comment specifically about the candidate’s ability to succeed in an accelerated graduate-level degree program; (3) passing scores from the Illinois Certification System Test of Academic Proficiency (September through December test dates are recommended). Unless special consideration is accorded an applicant by the MAT Admissions Committee, candidates must also meet the following minimum grade point requirements (based on a 4.0 scale): (1) an overall undergraduate grade point average of 2.75 (based on a 4.0 scale); (2) a grade point average of 2.75 in the final 60 hours of course work; and a GPA of 2.75 in a minimum of 18 hours of course work completed prior to EDUC 500 in the content area for which certification is sought. In the case of graduate students who have completed 12 or more hours of graduate level course work, the graduate GPA is used, and it must meet or exceed 3.000 (based on a 4.000 scale). MAT Admissions Committee members consider undergraduate major, past performance in the content area for which certification is sought, performance in other relevant course work, professional experience, strength of recommendations, test results, and any available anecdotal information in prioritizing candidates for acceptance to the program. In years where the number of qualified candidates exceeds the Department’s capacity to handle projected enrollment numbers, candidates may be asked to attend a half-day admission seminar during which an on-site essay and videotaped interview will be obtained for use in making final selection decisions. As space is available in any cohort, non-declared graduate students may be permitted to enroll in MAT courses offered during summer 1; continued...
enrollment in M.A.T.-related course work as a non-declared graduate student, however, is contingent on meeting or exceeding published admission criteria and obtaining full admission status. Contingent enrollment may be offered by the M.A.T. Admissions Committee in extenuating circumstances, but is not guaranteed and does not constitute a promise of admission to the M.A.T. program.

**Retention and Graduation.** Students in the M.A.T. program are expected to complete the degree in two intersession/summer terms and one academic year, although variations in this progression are occasionally necessary. To complete degree requirements within the normal 15-month sequence, candidates enroll in the following blocks of courses to earn a minimum of 41/maximum of 50 graduate credits, dependent on the area of concentration selected.

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1. Content area methods courses must be at the graduate level; six credit hours of content area electives are required for the degree.
2. Content area methods courses vary by area of concentration and credit hour assignment. In addition, they may or may not carry graduate credit, but are required for program completion and certification.

To remain in the program, M.A.T. candidates must maintain a minimum overall graduate grade point average of 3.00 and obtain successful summative evaluations at the completion of EDUC 500 and 501.

To graduate, the candidate must: (1) prepare and share publicly a professional exhibit to demonstrate professional growth throughout degree program; (2) publicly present results and recommendations from an action research collaborative project to a university and/or school faculty review committee; (3) achieve the equivalent of a 3.00 GPA in the teaching apprenticeship and internship; and (4) successfully implement an instructional unit or lesson plan that requires use of digital resources and technologies.

**Master of Science in Education Degree**

The Master of Science in Education degree in Curriculum and Instruction requires the completion of a minimum of 32 or 36 hours of course work, depending on the research requirement selected. At least 15 of the required semester hours must be at the 500 level and taken at SIU. The student must also meet Curriculum and Instruction core course requirements, research requirements, and specialty area requirements. No more than six semester hours of credit earned at another NCATE/TEAC-accredited or equivalent college or university may be accepted toward this degree. All transfer credits must be approved by the coordinator of the student’s specialty area.

Each candidate’s program is planned in consultation with a faculty adviser from the specialty area selected by the student, with consideration for the student’s interests, experience, and specialty area. Nondeclared graduate students are advised to consult with the department chair concerning admission to the master’s program.

A student desiring teacher certification (preschool, elementary, secondary, or K-12) must be admitted to the Teacher Education Program and must follow the teacher certification entitlement process established by SIU in conjunction with the Illinois State Board of Education. An alternative route to certification may be available through the College of Education and Human Services for qualified candidates. Several areas of study offer coursework designed to meet certification or endorsement requirements set by the Illinois State Board of Education. Consultation with an adviser and a carefully determined program of study can lead to the desired certification or endorsement.

**Admission and Retention.** Admission to the master’s program requires a 2.7 gpa for the last 60 hours of the bachelor’s degree as well as the recommendation of the specialty area faculty. A TOEFL score of at least 550 (220 computerized score) is also required for international students and must be more than two years old. Students must maintain an overall 3.0 graduate gpa to be retained in the master’s program. The progress of each student is reviewed periodically. Students who do not make satisfactory progress, or who violate the regulations of the department, college, or university, may be dropped from the program.

**Program Requirements.** The Master of Science in Education degree in Curriculum and Instruction requires a nine-semester hour professional core and specialty area courses (12 to 15 semester hours). The professional core consists of C&I 500, Research Methods in Education; C&I 503, Introduction to the Curriculum; and C&I 504, Systematic
Approaches to Instruction. All professional core courses must be completed with a grade of C or better, and an overall grade point average of 3.0 must be obtained for the professional core. The specialty area program consists of either 23 semester hours of coursework including a thesis or 27 semester hours of coursework. The minimum number of required semester hours is 32 for students completing a thesis or 36 for students completing the coursework only option.

The Master of Science in Education degree in Curriculum and Instruction with a concentration in Learning Systems Design and Technology (LSDT) prepares professionals who use research-based practice to create effective learning and performance support systems utilizing technology in educational institutions at all levels as well as non-school, government and business settings. Competencies developed include those employed in online, distance or e-learning, learning within virtual or simulated environments such as games and simulation, content management systems, and traditional classroom environments. A core of 7 courses (21 semester hours) is required; students consult with their advisors to select additional, elective courses. At least 15 semester hours must be at the 500 level and taken at SIU. All professional core courses must be completed with a grade of C or better, and an overall grade point average of 3.0 must be obtained for the professional core. Opportunities for practicum, internship, and either a research paper or thesis are available. The minimum number of required semester hours is 32 for students completing a thesis or 36 for students completing the coursework only option.

LSD&T Required Courses (21 Credit Hours)
1. CI 504: Systematic Approaches to Instruction
2. CI 486A: Instructional Development Studio I
3. CI 557: Task Analysis
4. CI 555: Instructional Message Design
5. CI 540: Learning Models for Instructional Design
6. CI 553: Consulting in Learning Systems Design & Technology
7. CI 484: Interactive Multimedia for Learning
8. CI 500: Introduction to Research Methods in Education

LSD&T Elective Courses (15 Credit Hours)
1. CI 401: Designing Digital Games and Simulations
2. CI 400: Social and Informal Learning
3. CI 452: Digital Video Production
4. CI 482: Web Applications for Teachers
5. CI 455: Design and Delivery of e-learning
6. CI 437: Instructional and Human Performance Technology
7. CI 484: Interactive Multimedia for Learning
8. CI 498N: Workshop in Educational Technology
9. CI 551: Assessment and Learning Using Virtual Environments
10. CI 587: Evaluating Learning and Instructional Programs
11. CI 560: Content and Learning Management Systems for e-learning
12. CI 486B: Instructional Development Studio II
13. CI 585N: Topical Seminar in Educational Technology
14. CI 595N: Internship: Educational Media

Doctor of Philosophy in Education Degree
The Doctor of Philosophy in Education degree with a concentration in Curriculum and Instruction is designed for teachers and other educational personnel who seek to improve their performance in general and specialized areas. The program is designed for students who desire positions requiring advanced preparation at the highest level with emphasis on theories of curriculum and instruction and in-depth preparation in research. For example, this program is oriented toward students who aspire to positions with institutions of higher education, state departments of education in the United States, ministries of education in foreign countries, educational sections of human service agencies, business and industry, and public schools.

Admission. In addition to the application for admission to the Graduate School, the applicant must also complete the departmental application for admission to the concentration and the related specialty area. A selection and review committee screens the applicant on the basis of prior graduate work, grade point average, standardized test scores (Graduate Record Examination), research ability, work experience, and letters of recommendation. The TOEFL score is required for international students and must be no more than two years old. The GRE score must be no more than five years old. The selection committee recommends admission of the student only if the specialty area has a faculty member who is qualified to direct dissertations and who agrees to serve as chair of the student’s doctoral committee.

The admissions committee may possibly recommend a student for admission who shows some deviation from departmental standards if, in the committee’s opinion, the student shows unusual professional promise.

Retention. Any prospective doctoral candidate with a grade point average of less than 3.25 and 20 semester hours of doctoral work will not be allowed to continue in the program and will not be re-admitted at a later date. Students must accumulate an overall grade point average of 3.50 for all doctoral work to qualify to take the preliminary examination. Prior to the completion of 30 semester hours of coursework, students meet with their major professors to determine whether or not to continue as doctoral students. Such matters as grade point average, progress in the program, course completion, motivation, general academic scholarship, and skills in writing and research are considered. A report is then made to the doctoral committee and the department chair. Students who are not making satisfactory progress or who violate the regulations of the department, college, or university, may be dropped from the program.

Program Requirements. The concentration in Curriculum and Instruction has both College of Education and Human Services and departmental requirements. A minimum of 72 semester hours beyond the master’s degree is required. The College of Education and Human Services professional core of at least 6 semester hours consists of EDUC 510, Introduction to Doctoral Studies in Education, and either EDUC 511, Doctoral Seminar in Philosophical and Cultural Foundations of Education, or EDUC 512, Doctoral Seminar in Behavioral and Cognitive Foundations of Education.

The Curriculum and Instruction requirements include a core of nine semester hours; at least 24 semester hours in
the selected specialty area; research tools totaling at least 9 semester hours; and a minimum of 24 semester hours of dissertation. An internship of 2 to 8 semester hours is highly recommended. Courses comprising specialty area hours other than the core courses are determined by the student and the doctoral committee. No more than six semester hours of credit earned at another NCATE/TEAC-accredited or equivalent college or university may be accepted toward this degree. All transfer credits must be approved by the coordinator of the student’s specialty area. The professional core of courses in the Curriculum and Instruction concentration includes: C&I 582, Advanced Research Methods in Education; C&I 583, Instructional Theory, Principles, and Practices; and C&I 584, Curriculum Theory, Foundations, and Principles. All professional core courses must be completed with a grade of C or better, and an overall grade point average of 3.0 must be obtained for the professional core.

Research Requirements. The Ph.D. in Education is a research-oriented degree. Each doctoral student in education must successfully complete three semester hours of Introduction to Qualitative Methods (EAHE 587) and three semester hours of Introduction to Quantitative Methods (EPSY 505). In addition, each student must complete a minimum of one other three-credit course on research methods (also referred to as “research tool”). Students with previous coursework in introductory research methods can petition to replace these introductory courses with higher-level research methodology coursework. A list of approved research tool courses for the Ph.D. in Education degree is available in the Ph.D. Policies and Procedures Manual of the College of Education and Human Services.

Courses (CI)

400-3 Social and Informal Learning. Covers games, simulations, role-playing, discussion forums, and social networking as informal modes of learning in both education and training contexts. Both face-to-face and online aspects of social and informal learning are considered.

401-6 (3,3) Designing Digital Games and Simulations. This course focuses on the design and development of simulated environments (such as digital games and virtual worlds) and how they may be used for the delivery of online learning and instruction. The production process will focus on the use of suitable technologies and game development toolkits to create immediately usable prototypes for learning showcases.

402-3 The Study of Cultural Diversity in Education and Family Services. The student examines origins, characteristics of behavior, learning patterns, family constellations and lifestyles of the diverse cultural groups in our community, state and nation. Students will identify their own cultural background and biases; recognize diversity resulting from ethnic origin, gender, age or disability; and experience ways of learning about cultures other than their own that promote constructive communication and integration into all aspects of schooling, teaching and family services.

403-3 Child Abuse and Neglect. Examines the many facets of child abuse and neglect. Emphasis is on current research in the field, as well as the roles and responsibilities of various professionals who work with children and their families.

404-3 Infant Development. Current theories and knowledge concerning growth and development of infants, with related laboratory field experiences. Prerequisite: CI 237 or PSYC 301 or equivalent.

405A-2 Methodologies for Group Care of Infants and Toddlers. Students will develop competencies and skills needed by early childhood professionals for work with children up to the age of three in an inclusive group care situation. Emphasis is on planning developmentally appropriate curriculum and assessment and stimulating environments for infants and toddlers. Students are required to have concurrent enrollment in CI 405b. Prerequisite: CI 318a, CI 318b, CI 404.

405B-2 Practicum in Methodologies for Group Care of Infants and Toddlers. This practicum will prepare students to work in optimal learning environments for infants and toddlers. Participation is four hours per week (fall and spring) and eight hours per week (summer) at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in CI 405a. Prerequisite: CI 318a, CI 318b, CI 404.

406-3 Foundations of Learning Systems Design & Technology. This course provides students with an overview of the issues related to learning systems design and technology (formerly, instructional design and technology). It covers historical foundations, trends, current
practice, and future directions of the field and provides students with the context of the courses in the concentration.

**407-3 to 9 (3 per topic) Diagnostic Teaching Strategies for Classroom Teachers.** Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students under-achieving in the areas of (c) Language Arts, (e) Mathematics, and (f) Reading. Prerequisite: CI 423, (c) CI 322, (e) CI 422, (f) or consent of instructor.

**408-3 Current Issues in Early Intervention.** This course will examine developmental ecology of early intervention and the dynamic processes by which children and their environments interact. A comprehensive overview of the knowledge base and critical assessment and implementation strategies of early childhood intervention along with intervention models and appropriate practice will be covered. Prerequisites: CI 237, SPED 405 or consent of instructor.

**409-3 Creative Teaching.** To assist pre- and in-service teachers in acquiring methods and materials that will improve instruction in the public school classroom, with special attention to the characteristics and needs of students. Prerequisite: EDUC 316 or consent of instructor.

**410-2 Creative Writing in the Public School.** Techniques of encouraging creative writings in the schools.

**412-3 to 15 (3 per topic) Improvement of Instruction in Early Childhood Education (Preschool-Grade 3).** Examines recent findings, current practices and materials used in early childhood education in the fields of (c) Language arts, (d) Science, (e) Mathematics, (f) Reading and (g) Social sciences. Prerequisite: specialized methods course for the field of study selected by the student.

**413-3 Language Development of the Young Child, 0-8 Years.** The normal language development and communication skills of the young child will be the focus of this course; attention will be given to an integrated, holistic philosophy toward development and learning in young children ages 0-8; specifically focusing upon social and environmental influences on the development of language and literacy, students will observe, listen, record and analyze samples of young children’s communication. Prerequisite: CI 237 or PSYC 301 or graduate standing.

**415-3 Modern Approaches to Teaching Middle School Mathematics (Grades 4-8).** Examines current mathematics materials and teaching approaches. Hands-on experience with a multitude of teaching aids including microcomputers and problem solving materials. Student exchange of ideas and discussion of activities for classroom use. Prerequisite: 322 and an overall GPA of at least 2.75.

**417-3 Administration of Early Childhood and Family Programs.** This course introduces students to the planning, organizing, and daily management of programs serving young children and their families. Topics will include funding/budgeting, staffing, programming, and evaluation. Prerequisite: CI 318.

**418-3 History and Philosophy of Early Childhood Education.** A survey of the history and philosophies of early childhood education with implications for current program practices. Students’ analyze their personal philosophy of early childhood education. Prerequisite: senior or graduate standing; CI 318; or consent of instructor for graduate students.

**419-3 Child, Family and Community Involvement.** The course is designed to provide students with the knowledge and skills needed to work successfully with parents and parent groups in individual and community settings. The focus will be on strengthening adult-child and parent-staff relationships in home, school and community settings. Parent involvement in early childhood programs and parent education will be stressed. Prerequisite: CI 227 and/or concurrent enrollment in CI 318; or consent of instructor for non-early childhood major and/or graduate students.

**420-3 Adult Literacy Strategies.** The focus is on understanding the problems of the individual whose literacy level does not permit full participation in economic, social, family and civic opportunities. Emphasis is placed on developing strategies to support and strengthen adult literacy skills.

**421-3 Building Family Literacy Programs.** This course will provide an in-depth look at family literacy. Emphasis will be placed on the history and foundations of family literacy, research, program models, quality programming, program evaluation and funding. The course is designed for both the experienced and the developing family literacy professional. Prerequisite: CI 419.

**422-3 Teaching Reading in the Elementary School.** (Same as Special Education 422) Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Prerequisite: for Elementary Education majors: grade of C or better in CI 321, CI 435 and Education CI 313 or consent of instructor; for Special Education majors; admission to the Teacher Education Program. Note: Elementary Education majors must take CI 423 and EDUC 322 concurrently with this class.

**423-3 Teaching Elementary School English Language Arts.** Oral and written communication processes with emphasis on the structure and process of the English language arts in the elementary school. Specific attention to the fundamentals of speaking English, writing, spelling and listening. Study of learning materials, specialized equipment and resources. Prerequisite: SPCM 101 or equivalent, C or better in CI 321 and CI 435 or consent of instructor. Note: Elementary Education majors must take CI 422 and EDUC 322 concurrently with this class.

**424-3 Teaching Elementary School Social Science.** Emphasis on the structure and process of teaching social science in the elementary school setting. Specific attention to the fundamentals of developing social science objectives, planning units, developing a general teaching model, organizing the curriculum and evaluating behavioral change. Study of learning materials, specialized equipment and resources. Prerequisite: grade of C or better in CI 422, CI 423 and CI 426 or consent of the instructor.

**426-3 Introduction to Teaching Elementary School Science.** Content and methods of elementary school sciences, grades K-8. Emphasis on the materials and strategies for using both traditional and modern techniques of science education. One or more field trips. Prerequisite: Grade of C or better in CI 321, CI 435, SCI 210A, and SCI 210B, or equivalent.

**427-3 Science Process and Concepts for Teachers.** Specifically designed to develop those cognitive processes and concepts needed by elementary school teachers in the
teaching of modern science programs. Prerequisite: grade of C or better in CI 422, CI 423, CI 426, SCI 210A, and SCI 210B, or equivalent.

428-3 Inquiry Skills for Teaching Junior and Senior High School Science. The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations.

429-3 Instructional Methods for the Primary Child: Social Sciences and Science. Emphasis on creating optimum learning environments, planning instruction, models for teaching, integrated learning and appropriate instructional methods in science and social sciences, grades 1-3. Early childhood certification students must have concurrent enrollment in EDUC 329 to provide practical experience one-half day per week. Concurrent enrollment in CI 430 required. Prerequisites: CI 316, CI 324, or consent of instructor.

430-3 Instructional Strategies for the Primary Child: Mathematics. Emphasis on creating optimum learning environments, integrated learning and appropriate instructional methods in the content area of mathematics, grades 1-3. Early childhood certification students must have concurrent enrollment in EDUC 329 to provide practical experience one-half day per week. Concurrent enrollment in CI 429 required. Prerequisite: CI 316, CI 324, or consent of instructor.

433-3 Literature for Children and Early Adolescents. Studies types of literature; analysis of literary qualities; selection and presentation of books and other media for children and early adolescents; and integration of literature in preschool, elementary and middle school and library settings. Prerequisite: admission to the Teacher Education Program, C or better in ENGL 101 and ENGL 102, and overall GPA of 2.75; or consent of instructor.

437-3 Instructional and Human Performance Technology. For those persons interested in the role that learning systems and instructional design and technology play in the field of human performance technology. Emphasis is upon performance problem identification, the distinction between skill/knowledge deficits and other performance problems, and the rationale for instructional solutions as well as electronic performance support systems, feedback and incentives, certification and other HP technologies.

441-3 Multicultural Literature for Children. Identification, selection and evaluation of books and audiovisual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans. Prerequisite: CI 435 or consent of instructor.

445-3 Literature for Young Adults. The selection and use of books and other educational media for students in the junior and senior high school.

452-3 Digital Video Production. Video has become an essential aspect of teaching, training, and communications. This course is an intensive workshop that provides a thorough understanding of video formats, video production, and video editing techniques. No previous experience with video production is required. Lab fee: $20.

455-3 Design and Delivery of e-Learning. Investigates e-learning in both higher education and corporate training contexts. The course draws upon the tradition of distance education in covering the design, delivery, and evaluation of online and blended learning in higher education. The course also draws upon the tradition of computer-based training (CBT) in covering the design, delivery, and evaluation of web-delivered training in corporations and organizations. Lab fee: $20.

458-3 Classroom Teaching with Television. Classroom utilization of open and closed circuit television. Emphasis is placed on the changed role of the classroom teacher who uses television. Evaluation of programming, technicalities of ETV and definition of responsibilities are included. Demonstration and a tour of production facilities are provided.

460-3 Teaching Reading and Writing in the Middle Grades. Familiarizes middle grades teachers with issues relevant to instruction in literacy skills essential to learning in any subject area. Students will demonstrate personal competency relevant to these skill and understanding of strategies for identifying problems and developing literacy competencies in young adolescents. Prerequisite: CI 422 (for elementary majors), 360 (for secondary majors), or consent of instructor.

462-3 Middle and Junior High School Programs. Focuses on the development of middle and junior high school curriculum and the identification of instructional activities for early adolescents. Emphasis is placed on development of literacy strategies, developmentally appropriate teaching strategies, interdisciplinary unit planning, teaming, and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: EDUC 313 or consent of instructor.

463-3 Meeting in Social and Emotional Needs of Gifted Children. Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. In particular, this course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will not only cover particular curriculum and instruction strategies designed for this population but also will emphasize strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: CI 467 or consent of instructor.

464-2 Student Activities. Analysis of extra-class activities and programs in public schools with a focus on the status, trends, organization, administration and problems.

465-3 Advanced Teaching Methods. The focus is on a variety of teaching methods and strategies, which are appropriate for secondary and/or post-secondary educators. Both individual and group methods are emphasized.

466-3 Documenting Accomplished Teaching. This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS) certification process. As part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work.

467-3 Methods and Materials in the Education of the Gifted. Content focused on the most appropriate instructional strategies and materials to be utilized with the gifted. Time spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students.
468-3 Science Methods for Middle and Senior High Schools. A performance-based approach to instructional skills common to teaching natural science at the middle and senior high school levels. Three class hours and one micro teaching laboratory hour per week. Prerequisite: consent of instructor.

469-3 Teaching Social Sciences in the Secondary School. Emphasis is placed on the analysis and evaluation of the social sciences with focus on instructional strategies and curricular designs in the teaching of history, geography, political science, economics, and sociology. Prerequisite: EDUC 313 or consent of instructor.

470-3 Advanced Secondary Social Science Teaching Methods. This course will help students develop instructional materials and curricular designs for history and social science classrooms at the secondary level. Students will also have an opportunity to gather, analyze, corroborate, and synthesize sources and data for research they can then incorporate in their own classroom. Integrating technology in instruction and assessment will also be emphasized.

473-3 Teaching in Middle Level Schools. Acquaints students with issues of teaching young adolescents and the role of teachers in connecting school with community resources. Information from current area specialists and exemplary practitioners extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development related to the curriculum. Lab fee: $10. Prerequisite: CI 462, EDUC 313 or consent of instructor.

482-3 Web Applications for Teachers. Investigates use of the Internet in classroom instruction and for professional development. Focus is on the "4 Cs" of Internet use by teachers: Communication, Content, Collaboration, and Community. Lab fee: $20.

483-6 (3,3) Instructional Applications for Microcomputers. A study of the development and use of microcomputers systems in educational settings. Emphasis is upon the characteristics, capabilities, applications and implications of microcomputers and microcomputer lessons, with case studies of their integration into the teaching, learning process.

484-3 Interactive Multimedia for Learning. An introduction to the evaluation, design, and development of interactive instructional multimedia programs. The instructional methods of Tutorial, Drill, Simulation, and Educational Games are covered. Projects include designing, developing, and using testing an interactive instructional multimedia program. Lab fee: $20.

486A-3 Instructional Development Studio I. The "Learning Studio" environment provides students with the opportunity to learn and use authoring systems, languages and product development tools to design, develop and produce online resources for learning and instruction. Participants will showcase learning artifacts created using a variety of commercial productivity tools and creativity suites. Prerequisite: basic web design skills. Special approval needed from the instructor. Lab fee: $20.

486B-3 Instructional Development Studio II. The "Learning Studio" environment provides students with the opportunity to learn and use authoring systems, languages and product development tools to design, develop and produce online resources for learning and instruction. Participants will showcase learning artifacts created using a variety of commercial productivity tools and creativity suites. Prerequisite: basic web design skills. Special approval needed from the instructor. Lab fee: $20.

487-3 Web-based Applications for Teachers and Instructors. Survey of trends and developments and laboratory instruction in the use of Web-based applications representative of those used by teachers, education specialists, or instruction in educational settings. An emphasis is placed upon developing skills used by teachers, education specialists, or instructors which enhance and facilitate the education processes within a Web-based learning environment. Laboratory fee: $20.

495-2 to 8 Field Experience. Supervised learning experiences in settings for children and families and public agencies. Prerequisite: 318, 405 and consent of instructor.

496-2 to 6 (2 to 4 per semester) Field Study Abroad. Orientation and study before travel, readings, reports and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term are 4.

498-1 to 15 (1 to 3 per topic) Workshops in Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices in each of the following areas: (a) Curriculum, (b) Supervision for instructional improvement, (c) Language arts, (d) Science, (e) Mathematics, (f) Reading, (g) Social sciences, (h) Early childhood education, (i) Elementary education, (j) The middle school, (k) Secondary education, (l) School library media, (m) Instruction, (n) Educational technology, (o) Environmental education, (p) Children’s literature, (q) Family studies, (r) Computer based education, (s) Gifted and talented education, and (t) Teacher education. Maximum of six hours toward a Master’s degree. Prerequisite: consent of instructor.

500-3 Introduction to Research Methods in Education. The student will evaluate and synthesize research, demonstrate a basic understanding of research concepts and principles, and compare and contrast specific methods for conducting research.

501-3 Improving School Reading Programs. For teachers, reading specialists, instructional leaders. Current issues, trends, practices in improving school reading programs at all levels. Special emphasis on school based management, teachers as change agents, curriculum evaluation, staff development and roles of school personnel. Participants assess existing programs and develop improvement plans. Prerequisite: CI 512, CI 513 or CI 561.

503-3 Introduction to the Curriculum. Deals with the nature, purposes and functions of curriculum planning and development; curriculum design and organization; curriculum implementation and maintenance; and curriculum evaluation as each component relates to the total curriculum.

504-3 Systematic Approaches to Instruction. Gives graduate students an opportunity to investigate, discuss and apply systematic approaches to instruction. Special emphasis is given to that element of the instructional system that allows for the integration of instructional media into the process.

506-3 Professional Services for Diverse Family Structures. Case analysis of different family structures through seminar teams. Each team will be responsible for analysis of the interaction of the family structure and the
economic, nutritional, and socializing activities carried out within the family-household. Role and sources of assistance through current programs will be included. Prerequisite: consent of instructor.

507-3 The Impact of Public Policy on Family Life. This course focuses on an analysis of policies that impact the lives of children and families and includes an overview of the legislative process at the local, state, and national levels. The course emphasizes practical ways in which we can become proactive and effective advocates for children and their families.

508-3 Systematic Observation and Analysis of Instruction. Students will learn to use conferencing techniques and to construct and use valid and reliable systematic observation instruments to provide the basis for analysis and feedback about classroom instruction.

509-3 Foundations of Environmental Education. Designed specifically to provide teachers, administrators and curriculum specialists with the knowledge and skills necessary to implement environmental education strategies in both elementary and middle schools. Includes work in ecological foundations, programs currently in use, unit designs, methods and research. One or two field trips may be required.

510-3 Values Education Curriculum. Alternative views of the impact of schooling on children’s values will be explored. Current curricular approaches to moral education will be examined with special emphasis given to values clarification and the cognitive-developmental approach of Lawrence Kohlberg. Psychological and philosophical assumptions underlying the major approaches to moral education will be critically examined.

511-3 Seminar in Psychology of Elementary School Subjects. Psychological principles of learning theories as applied to the mastery of materials used in elementary and early childhood education school subjects. Emphasis is placed on implications of theories of learning for curriculum development and instruction.

512-3 Reading in the Elementary School. First course in the reading sequence. Survey of the reading process. Introduction to factors affecting the reading process, the common core of skills, teaching strategies, materials and research.

513-3 Emergent Literacy. A study of early literacy. Explores the foundations of family literacy as the basis for continued development of reading and writing in kindergarten and the primary grades.

514-3 The Pre-School Child. Growth of the child from birth to six years with emphasis on the various aspects of growth and the interrelationships.

515-3 Advanced Remediation in Mathematics. Strategies for the design of prescribed systematic instruction for correcting identified mathematics difficulties. Experience in designing and preparing materials for corrective purposes. Prerequisite: CI 407e or consent of instructor.

516-3 Teaching Mathematics in the Elementary School. Master’s degree level course, which acquaints the student with, approaches to teaching, development of curriculum materials and authoritative positions on the mathematics of grades K-8. Emphasis on teaching aids, problem solving and recent developments at this level.

517-3 Early Childhood Programs: Organization and Administration. Presents an overview of the organization and administration of programs for children ages three to eight with experiences in planning for operating and administering such programs. Prerequisite: CI 518 or consent of instructor.

518-3 Critical Issues in Early Childhood. A survey of current problems and practices in early childhood education for children from three to eight years of age, with emphasis on reading in current research literature. Special approval needed from the instructor.

520-3 Action Research in Early Childhood. (Same as CI 544) Major trends and current issues in research as they relate to child development and early childhood programs will be explored. Special emphasis will be placed on the relationship of research to professional preparation and practice. Restricted to early childhood students who have taken all core courses for completion of the master's degree. Letter grade/DEF.

521-4 Advanced Diagnostic Teaching of Reading. Emphasizes diagnostic teaching strategies that teachers and reading specialists employ when dealing with underachievement in reading. Students use informal and formal tests, observation and trial lessons to select instructional materials and activities appropriate to different reading/writing problems. Each student tutors persons while being supervised. Prerequisite: CI 512 or CI 513 or CI 561, CI 407f and consent of instructor.

522-3 Integration of Technology in Mathematics and Science Teaching. Integrating technology in Math and Science teaching. Technology may include calculators, computer software, computer-based laboratories, data collection devices, interactive manipulatives, and other internet resources. Special approval needed from the instructor.

523-3 Language Arts in the Elementary School. The practical bearing of investigation and theory on the improvement of current practices in the teaching of the language arts other than reading. Attention given to evaluation of teaching materials in these areas. Prerequisite: CI 423 or consent of instructor.

524-3 Methods for Teaching Social Sciences in the Elementary School [Pre-K-6]. A study of theory and practices of teaching and developing programs in elementary school social sciences. Particular attention to be given to trends and issues in social sciences. Various social science models will be examined and evaluated for practical use. Students must demonstrate competencies and skills related to content reading for the social sciences.

525-3 Integration of Technology into Mathematics Education [PreK-8]. Technology use in mathematics teaching and learning, such as handheld calculators/computers; hands-on experience in teaching with easily learned tools for teaching/learning mental computation, computation, algebra, geometry, probability, statistics and use of software - e.g., Shapemakers, Geometer’s Sketchpad, Excel, graphing calculators, computer-based laboratories, data collection devices, interactive websites and other internet resources.

526-3 Problems in Elementary School Science Education. Emphasis upon identifying problems and trends within elementary school science education and planning for research in this field. Prerequisite: CI 426.

527-3 Advanced Family Studies. Examines contemporary American families with emphasis upon the strengths, diversity, and challenges associated with each of the variant
forms of family life. Focuses particularly on the implications of these issues for families with young children.  

528-3 Methods for Teaching Mathematics in the Preschool and Early Childhood Grades (Pre K-3). Acquaints the student with the learning characteristics of children and teaching methods at grades pre-K-3. Emphasis on concrete manipulative teaching aids, learning readiness and diagnosis of learning difficulties.  

529-3 Modern Approaches to Teaching Secondary School Mathematics. (Same as MATH 511) Topics will include problem solving, applications of mathematics and teaching proofs in secondary school mathematics. Practical classroom use of materials will also be emphasized. Prerequisite: consent of instructor.  

530-3 Teaching Problem Solving in School Mathematics (Grades K-8). Designed to acquaint teachers with problem-solving processes and how to integrate problem solving into their teaching. Emphasis is placed on teaching the process of problem solving. Prerequisite: graduate standing or consent of instructor.  

531-3 Curriculum for Elementary & Middle Level Schools. Designed to assist teachers and administrators in making curricular decisions for elementary and middle level schools based on knowledge of educational foundations, standards, learning experiences, research, materials and methods, instructional programming and evaluation.  

532-3 Courseware Design and Analysis. The analysis of principles and strategies employed in the design of computer based courseware and computer based training materials. Emphasis upon examining educational, social and psychological learning principles and the assumptions used by authors of computer software in the design of K-12 software and computer based training materials. Laboratory fee: $20.  

533-3 Instructional Leadership. A study of research and related literature concerning the roles and responsibilities of various instructional leaders in public and private schools, professional development centers, state departments of education and college or university settings. Leadership styles and behaviors, especially as they apply to the academic circumstances and environments in specific case studies, are examined.  

534-3 Organization of the Elementary School. An analysis of types of elementary school organizations with special attention to influence of school organization upon the educational program. Application of research findings to selection and use of materials of instruction. Special consideration to classroom teachers' professional problems.  

535-3 Reading and Language Arts Research Seminar. Students survey current research in Reading and Language studies and present a research paper to the seminar participants. Prerequisite: CI 500, nine hours coursework in reading and language arts, and consent of instructor.  

536-3 Partnerships and Mentoring the New Professional. A study of the theories, practices and research of Professional Development Schools and other collaborative teacher education and school reform initiatives with special attention given to the issues of collaboration and cooperation, team building and consensus building, honoring diversity and change, and educators as problem solvers.  

537-3 Current Issues in Mathematics Education. This course provides graduate students with opportunities to study, discuss, and critically analyze issues and research in mathematics education. Students will become familiar with the major problems and issues facing mathematics educators at all school levels. Examination of recent mathematics education literature will be included as students gain and overall perspective on the discipline of mathematics education.  

538-3 Research in Mathematics Education. This course provides graduate students with opportunities to study, discuss, and make critical analyses of recent mathematics education literature and issues in the USA and other countries. Students will gain a better perspective on NCTM Standards and their relationship to research as they develop a detailed lesson plan in mathematics and conduct both a literature review and a data analysis report in mathematics education. Prerequisite: CI 537  

539-3 Leadership in Mathematics and Science. An exploration of current literature in math and science leadership and the application of principles and skills necessary for mentoring instructional development in math and science. Special approval needed from the instructor.  

540-3 Learning Models for Instructional Design. Surveys models of learning as they apply to the fields of Instructional Design and Instructional Technology. Models ranging from behaviorism to constructivism are covered along with theories concerning cognitive development and motivation. Theories are applied to analyzing instructional situations.  

543-5 Fundamentals of Teaching and Learning. First course in the Master of Arts in Teaching (M.A.T.) program sequence. Its focus is on development of a specific set of planning skills secondary level teachers need to appropriately design, implement, manage, and assess student learning. The course is offered annually during spring intersession only. Special approval needed from the instructor. MAT Live Text Fee: $80.  

544-3 Action Research Methods. (Same as CI 520) The focus of the course is on learning about action research, learning to develop and use various data collection tools, developing an action research question, learning about and using various data analysis tools, developing a report, and presenting a research report to an audience of colleagues and peers. Prerequisite: CI 543 (required for MAT students) or consent of instructor. Letter grade/DEF.  

545-3 Literacy Instruction for Culturally and Linguistically Diverse Students. This course introduces students to issues related to first- and second-language development, language variation, cultural diversity, second-language instruction, English as a Second Language (ESL) and bilingual education, and culturally and linguistically responsive instruction. These topics will be explored in terms of student learning and teaching and prepare students to teach English language learners (ELLs), dialect speakers, and students from diverse cultural and linguistic backgrounds. The course will serve as an examination of contemporary language acquisition theory; overview of ELL reading research; exploration of methods for motivating and sheltering instruction for ELLs; and investigation of the impact of federal policies on the types of experiences ELLs are afforded. The course is required for students working toward the reading specialist/reading teacher endorsement.  

548-3 Science Education Research Investigations. This course involves the study of special problems and related research associated with practical educational situations in science education or related fields. The main objective is to provide doctoral students with opportunities to develop
551-3 Assessment and Learning Using Virtual Environments. This course covers the foundations and trends in the research literature regarding the use of game, simulated and virtual environments for online learning and assessments. Issues and implications of these environments for instructional delivery, decision-making analysis of users and performance assessment methodologies are included.

553-3 Consulting in Learning Systems Design and Technology. This course applies current research and technology to the solution of instructional problems in higher education and corporate training environments. The student is guided through the systematic process of identifying instructional and performance problems, specifying learning objectives, analyzing tasks and learners, organizing resources, specifying methods and media, and assessing outcomes. Special approval needed from the instructor.

554-3 Utilization of Educational Media. The utilization of print and non-print materials in instructional implementation and curriculum development. Structured for teachers, media directors, administrators and instructional designers. The increasing role of technological advances in education is stressed as those advances relate to learning theory and curriculum development.

555-3 Instructional Message Design. Emphasizes the use of cognitive theory and research-based principles for creating effective instructional text, pictures, and graphics. Topics include principles of perception, memory, concept, procedure, and principle learning, mental models, problem-solving, motivation and attitude change. A review of research issues in the study of instructional media and message design is included.

556-3 Advanced Development of Interactive Learning Systems. Design, development and evaluation of an online, interactive learning (e-learning) system using instructional design principles and models. Students must successfully complete CI 486 (3,3) or have equivalent training or experience to enroll in this capstone course. Prerequisite: CI 486 (3,3) or consent of instructor.

557-3 Task Analysis. Builds competence in applying the most current task and content analysis techniques used to make explicit the components of complex human performances and knowledge. Includes learning hierarchy analysis, information processing analysis, path analysis, job task analysis, skills analysis, fault tree analysis, concept analysis, knowledge engineering, matrix analysis, and pattern noting. Prerequisite: CI 504 or consent of instructor.

560-3 Content and Learning Management Systems for e-Learning. The course covers the design and development of Content and Learning Management Systems (CMS/LMS) for the management and online delivery of learning resources in education, business and other training settings. Emphasis will be placed on the rapid development and management of e-Learning systems using CMS/LMS development tools and Web 2.0 technologies.

561-3 Reading and Learning Content and Technical Text. For secondary and college teachers, and others who desire strategies to help students and workers learn from texts. Special emphasis is on how to help others improve their ability to comprehend, study and use texts and other print material encountered in secondary school and the workplace.

564-3 Curriculum Development for Gifted Students. Explorations of the knowledge and decision-making required to develop curriculum for gifted students, including philosophy, goals and objectives, designing and sequencing activities, curriculum models for gifted students; evaluation and modification of curriculum. Emphasis is placed on the development of curriculum to be used in schools for gifted students.

566-3 Instructional Strategies for Problem Solving. The focus is on developing those teaching strategies, which will foster and enhance problem solving skills and heuristic thinking. Representative of these teaching skills would be inductive and deductive approaches, discovery and inquiry techniques, and questioning strategies.

570-3 Current Issues in Social Science Education. This course uses historical and contemporary perspectives to explore the nature and purposes of social science education in American K-12 schools.

571-3 Secondary School Curriculum. An introductory course designed to explore the nature and development of the curriculum at the secondary school level. Historical perspective and foundations of curriculum are examined. Functional applications to the public secondary schools are emphasized.

573-3 Perspectives on the Future and Its Schools. Deals with the future development of education and social trends, which will influence that development. Emphasis is placed upon alternative models of education and their social bases.

575-3 Critical Issues in Instructional Supervision. Students will examine the history, nature and evolution of supervision for instructional improvement. Students will be introduced to concepts, theory and research findings from many fields of study that have implications for today's supervisory process. Supervisory assumptions and practices will be examined in light of current knowledge of teaching effectiveness.

576-3 Critical Issues in Teacher Education. Students will examine critical issues, problems, and trends in teacher education. Emphasis is placed on strategies for clarifying the issues, solving the problems and examining the possible impact of the trends.

577-3 Seminar in International Mathematics in Education. Deals with goals, contents, teaching methods, teacher training, curriculum development and research literature on mathematics education at the international level. Prerequisite: graduate standing or consent of adviser.

578-3 Advanced Study of Mathematics Education. Study of the practical and theoretical development of mathematics curricula and instruction, and viewing mathematics curriculum and instruction from philosophical and psychological perspectives. Prerequisite: advanced graduate study or consent of adviser.

580-3 Current Trends in Education. Trends, issues, problems in education related to the student, program, school organization, staff, material and media, the school building, and the process of innovation and change.

582-3 Advanced Research Methods in Education. The study and application of advanced skills used in planning, executing, reporting and utilizing educational research. Prerequisite: CI 500 or evidence of equivalent research competencies.
583-3 Instructional Theory, Principles, and Practices. Presentation of conceptual formulations and skills concerning instructional theory and principles; foundations of instruction; instructional systems and models; delivery processes (logistics), systems, and maintenance of quality control; and evaluation of teachers and students.

584-3 Curriculum Theory, Foundations, and Principles. The course will emphasize the study of the perspectives on curriculum theory that have guided the development of curriculum practice in the United States. Students will critically examine these perspectives and utilize them to develop and defend positions on contemporary curriculum issues.

585-1 to 15 (1 to 3 per semester) Topical Seminar. A graduate level seminar that involves the study of special problems and related research associated with practical educational situations. Problems available for critiquing and analyzing are the following: (a) Curriculum, (b) Supervision for instructional improvement, (c) Language arts, (d) Science, (e) Mathematics, (f) Reading, (g) Social sciences, (h) Early Childhood education, (i) Elementary education, (j) The Middle school, (k) Secondary education, (l) School library media, (m) Instruction, (n) Educational Technology, (o) Environmental education, (p) Children’s literature, (q) Family studies, (r) Computer based education, (s) Gifted and talented education, (t) Teacher education. Maximum of six hours toward a Master’s degree. Prerequisite: consent of instructor.

586-3 Curriculum Design and Development. Presentations concerning educational planning and curricular decision-making relating to curriculum: aims, goals, and objectives; nature of knowledge, disciplines, and subjects; curriculum structures: sequence and scope; substantive structural models; content and activity selection, product analysis and production; evaluation; and curriculum modification and change.

587-3 Evaluating Learning and Instructional Programs. The course emphasizes both the evaluation of individual learner performance and program evaluation in the interest of assessing curriculum and instruction effectiveness. The rationales and assumptions supporting criterion-referenced assessment are contrasted with those of norm-referenced assessment. Both qualitative and quantitative data collection strategies are included. Attention is also given to the construction of evaluation reports.

589-3 The Work of the Director of Curriculum and Instruction. The role of the director of curriculum and instruction is the focus of this course. Such topics as the background, current status, and tasks and functions of the position are examined. Additionally, such broad areas of the director’s role as needs assessment, program planning and evaluation, and in-service education planning are covered. Prerequisite: CI 586 or CI 587 or consent of instructor.

590-1 to 15 (1 to 3 per topic) Independent Readings. Directed readings in literature and research in one of the following areas: (a) Curriculum, (b) Supervision for instructional improvement, (c) Language arts, (d) Science, (e) Mathematics, (f) Reading, (g) Social sciences, (h) Early childhood, (i) Elementary education, (j) Middle school, (k) Secondary education, (m) Instruction, (n) Educational Technology, (o) Environmental education, (p) Children’s literature, (q) Family studies, (r) Computer based education, (s) Gifted and talented education, and (t) Teacher education. Maximum of four hours toward a Master’s degree. Prerequisite: consent of instructor.

592-3 Mixed Methods in Educational Research. An examination of how to combine qualitative and quantitative research methods and to defend such studies with reference to the tenets of the underlying constructivist and post-positivistic research paradigms. The objective of the course is for students to design and defend a mixed methods educational research study. Prerequisite: EAHE 587 and EPSY 505 or consent of instructor.

593-1 to 15 (1 to 3 per topic) Individual Research in Education. The selection, investigation and writing of a research topic under the personal supervision of a member of the departmental graduate staff, in one of the following areas: (a) Curriculum, (b) Supervision for instructional improvement, (c) Language arts, (d) Science, (e) Mathematics, (f) Reading, (g) Social sciences, (h) Early childhood, (i) Elementary education, (j) Middle school, (k) Secondary education, (m) Instruction, (n) Educational Technology, (o) Environmental education, (p) Children’s literature, (q) Family studies, (r) Computer based education, (s) Gifted and talented education, and (t) Teacher education. Maximum of three hours counted toward a Master’s degree. Prerequisite: consent of instructor.

594-(2 to 9 per topic) Practicum. For Master’s degree students: professional consultation, teaching demonstration, practical application of advanced theory, work with clinical cases, or program development implementation, and evaluation in school systems, community colleges, or universities. In addition, may involve reading and research directed to special problems involved in on-site situations. Practicum is available in the following areas: (a) Curriculum, (b) Supervision for instructional improvement, (c) Language arts, (d) Science, (e) Mathematics, (f) Reading, (g) Social sciences, (h) Early childhood, (i) Elementary education, (j) Middle school, (k) Secondary education, (m) Instruction, (n) Educational Technology, (o) Environmental education, (p) Children’s literature, (q) Family studies, (r) Computer based education, (s) Gifted and talented education, and (t) Teacher education. A maximum of nine hours credit may be applied toward a Master’s degree. Prerequisite: consent of instructor.

595-(2 to 8 per topic) Internship. Culminating experience for Ph.D. or specialist degree students. Students engage in specialized service areas either in their own or a cooperating school or school system or university. Weekly on-campus or on-site seminar will be held with the intern supervisor. Internship areas are: (a) Curriculum, (b) Supervision for instructional improvement, (c) Language arts, (d) Science, (e) Mathematics, (f) Reading, (g) Social sciences, (h) Early childhood, (i) Elementary education, (j) Middle school, (k) Secondary education, (m) Instruction, (n) Educational Technology, (o) Environmental education, (p) Children’s literature, (q) Family studies, (r) Computer based education, (s) Gifted and talented education, and (t) Teacher education. A maximum of eight hours credit may be applied toward a Ph.D. or specialist degree. Special approval needed from the instructor.

599-1 to 6 Thesis. Minimum of three hours to be counted toward a Master’s degree. Prerequisite: admission to Master’s degree program.

600-1 to 32 (1 to 12 per semester) Dissertation. Minimum of 24 hours for the Doctor of Philosophy degree.
601-1 per semester Continuing Enrollment. For those graduate students who have not finished their degree programs and who are in the process of working on their dissertation, thesis, or research paper. The student must have completed a minimum of 24 hours of dissertation research, or the minimum thesis, or research hours before being eligible to register for this course. Concurrent enrollment in any other course is not permitted. Graded $\text{S/U}$ or $\text{DEF}$ only.