COLLEGE OF EDUCATION

The College of Education develops multicultural researcher, scholars, learning leaders and practitioners who make a difference by promoting innovation, social justice, and lifelong learning with a focus on STEM and cultural and linguistic diversity. Our research and professional preparation foster scholarship, intellectual stimulation, openness, flexibility, and a sense of community.

104 Joyce Collin Furman Hall
Oregon State University
Corvallis, OR 97331-3502
541-737-4661
Website: http://education.oregonstate.edu

Student Services
OSU Corvallis Undergraduate Advisor, 541-737-2988
Undergraduate Student Services, 541-737-4661
Graduate Student Services, 541-737-4317
OSU Cascades
Admissions Advisor, 541-323-3118

Administration
Toni Doolen, Dean, toni.doolen@oregonstate.edu
Randy L. Bell, Associate Dean of Academics, 541-737-6387, randy.bell@oregonstate.edu
Jana Bouwma-Gearhart, Associate Dean of Research, 541-737-2206, jana.bouwma-gearhart@oregonstate.edu
Julie Gess-Newsome, Dean of Academic Affairs, OSU-Cascades, Associate Dean for Human Health and Wellness, 541-322-2045, julie.gess-newsome@osucascades.edu

Advising
Early and continuous advising is an important aspect of an education in both the undergraduate and graduate programs in the College of Education. Students pursuing an undergraduate degree shall meet with a professional academic advisor in the centralized advising office, while graduate students shall be assigned a faculty advisor. Students pursuing the undergraduate Double Degree in Education are urged to declare their interest to Undergraduate Student Services in Furman 104. Student should also declare a “pre-education” major once they have entered their sophomore year and passed at least one course in the Undergraduate Major Pre-Education Level 1 requirements. It is important for undergraduates to work concurrently with both the College of Education academic advisor and the academic advisor for their primary degree to ensure knowledge of academic progress, degree requirements, and educational opportunities in their chosen field.

Scholarships
The College of Education offers a variety of scholarships and fellowships to deserving students. A listing of the many opportunities can be found at http://education.oregonstate.edu/education-scholarships-and-fellowships. Students who have declared their major in education are encouraged to contact student services in Furman 104 to receive an application. Consider applying for scholarships during winter term each year. Additional state and private scholarship information are available at the OSU Office of Financial Aid and Scholarships.

Faculty
Professors Buxton, Crisp, Dierking, Ng, Storksdieck
Associate Professors Ciechanowski, Dykeman, Elliott, Knibler, Rowe, Rubel
Assistant Professors Arellano, Colomer, Giamellaro, Reese, Tevis, Thompson

Authorization and Accreditation
The College of Education is authorized by the State Board of Higher Education to offer teacher education and counseling programs and by the Oregon Teacher Standards and Practices Commission (TSPC) to recommend teacher and counselor candidates for initial licensure.

The Teacher Standards and Practices Commission (TSPC) listing of endorsements that OSU is authorized to approve is on the Web at http://www.tspc.state.or.us/program_list.asp.

All teacher education programs are fully accredited by the Council for the Accreditation of Educator Preparation (CAEP) and by the Oregon Teacher Standards and Practices Commission. Counselor education programs are fully accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

Applicants for teacher and counselor licensure must meet TSPC requirements in effect at the time of admission to a licensure program. Licensure rules are regulated by TSPC and may change. Students should consult regularly with their advisor.

Instructors
Emeritus Faculty
Copa, Courtney, Duvall, Falk, Flick, Higgins, Moule, Niess, Russ-Eft, Sanchez, Stern, Ward, Winograd

Program Leads
McKiel, Nyman, Pitcher, Platt, Schuetz, Schulz, Wright

Undergraduate Programs

Majors
- Education (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs)
- Pre-Education (http://catalog.oregonstate.edu/college-departments/education/pre-education)

Options:
- Advanced Mathematics Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/advanced-mathematics-teaching-option)
- Basic Mathematics Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/basic-mathematics-teaching-option)
- Biology Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/biology-teaching-option)
- Chemistry Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/chemistry-teaching-option)
- Early Childhood/Elementary Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/early-childhood-elementary-teaching-option)
- Family and Consumer Sciences Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/family-consumer-sciences-teaching-option)
- Health Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/health-teaching-option)
- Integrated Science Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/integrated-science-teaching-option)
- Language Arts Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/language-arts-teaching-option)
- Physics Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/physics-teaching-option)
- Social Studies Teaching (http://catalog.oregonstate.edu/college-departments/education/education-ba-bs-hba-hbs/social-studies-teaching-option)
- Elementary Education (http://catalog.oregonstate.edu/college-departments/education/education-bs-hbs)

Minors
- Education (http://catalog.oregonstate.edu/college-departments/education/education-minor)

Graduate Programs

Majors
- Adult and Higher Education (http://catalog.oregonstate.edu/college-departments/education/adult-higher-education-edd-edm-phd-mais)

Options:
- Community College Leadership (http://catalog.oregonstate.edu/college-departments/education/adult-higher-education-edd-edm-phd-mais/community-college-leadership-option)
- Leadership in Higher Education (http://catalog.oregonstate.edu/college-departments/education/adult-higher-education-edd-edm-phd-mais/leadership-higher-education-option)
- Counseling (http://catalog.oregonstate.edu/college-departments/education/counseling-mcoun-phd)

Options:
- Clinical Mental Health Counseling (http://catalog.oregonstate.edu/college-departments/education/counseling-mcoun-phd/clinical-mental-health-counseling-option)
- Counselor Education
- School Counseling (http://catalog.oregonstate.edu/college-departments/education/counseling-mcoun-phd/school-counseling-option)
- Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais)

Options:
- Advanced Science and Mathematics Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/advanced-science-mathematics-education-option)
- Agricultural Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/agricultural-education-option)
- Free-Choice Learning (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/free-choice-learning-option)
- Language Equity and Educational Policy (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/language-equity-educational-policy-option)
- Mathematics Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/mathematics-education-option)
- PK-12 English to Speakers of Other Language (ESOL) (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/pk-12-esol-option)
- Science Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/science-education-option)
- Science/Mathematics Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/sciencemathematics-education-option)
- Social Justice Education (http://catalog.oregonstate.edu/college-departments/education/education-edd-edm-ms-phd-mais/social-justice-education-option)
- Teaching (http://catalog.oregonstate.edu/college-departments/education/teaching-mat)

Options:
• Clinically Based Elementary (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/clinically-based-elementary-option)
• Elementary (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/elementary-option)
• Language Arts (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/language-arts-option)
• Mathematics (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/mathematics-option)
• Music (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/music-option)
• Science (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/science-option)
• Social Studies (http://catalog.oregonstate.edu/college-departments/education/teaching-mat/social-studies-option)

Minors
• Adult Education (http://catalog.oregonstate.edu/college-departments/education/adult-education-graduate-minor)
• Counseling (http://catalog.oregonstate.edu/college-departments/education/counseling-graduate-minor)
• Education (http://catalog.oregonstate.edu/college-departments/education/education-graduate-minor)
• Mathematics Education (http://catalog.oregonstate.edu/college-departments/education/mathematics-education-graduate-minor)
• Science Education (http://catalog.oregonstate.edu/college-departments/education/science-education-graduate-minor)

Adult Education and Higher Education Leadership

AHE 199. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 299. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 399. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 401. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 402. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 405. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 406. PROJECTS. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 407. SEMINAR. (1-16 Credits)
Equivalent to: UEXP 407
This course is repeatable for 16 credits.
AHE 408. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 410. INTERNSHIP/WORK EXPERIENCE. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 499. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 501. RESEARCH. (1-16 Credits)
Equivalent to: CSSA 501
This course is repeatable for 16 credits.
AHE 502. INDEPENDENT STUDY. (1-16 Credits)
Equivalent to: CSSA 502
This course is repeatable for 16 credits.
AHE 503. THESIS. (1-16 Credits)
Equivalent to: CSSA 503
This course is repeatable for 16 credits.
AHE 505. READING AND CONFERENCE. (1-16 Credits)
Equivalent to: CSSA 505
This course is repeatable for 16 credits.
AHE 506. PROJECTS. (1-16 Credits)
Equivalent to: CSSA 506
This course is repeatable for 16 credits.
AHE 507. SEMINAR. (1-5 Credits)
Equivalent to: CSSA 507
This course is repeatable for 16 credits.
AHE 508. WORKSHOP. (1-3 Credits)
Equivalent to: CSSA 508
This course is repeatable for 16 credits.
AHE 509. PRACTICUM. (1-16 Credits)
This course is repeatable for 16 credits.
AHE 510. INTERNSHIP. (1-18 Credits)
By special permission and arrangement.
This course is repeatable for 18 credits.
AHE 517. EDUCATION AND WORK. (3 Credits)
Issues related to work in the U.S. and other countries. The role of public, private, corporate, government, military and other education and training programs in meeting changing individual, corporate, and social work-related needs.
AHE 520. MULTICULTURAL ISSUES IN HIGHER EDUCATION. (3 Credits)
Developing understanding, knowledge, and skills of multiculturalism affecting the student affairs profession and careers in student affairs administration.
Equivalent to: CSSA 520
AHE 522. INSTRUCTIONAL TECHNOLOGY I. (1 Credit)
Explores technologies used in distance education to deliver content and facilitate active learning through learner creation of digital portfolios and artifacts using online tools and apps.
AHE 523. INSTRUCTIONAL TECHNOLOGY II. (1 Credit)
An overview of best practices in digital-age learning design, including implementation of backward design principles.
Prerequisites: AHE 522 with C or better
AHE 524. INSTRUCTIONAL TECHNOLOGY III. (1 Credit)
Students will develop the knowledge and skills needed to design and create complete online teachings/courses within a learning management system.
Prerequisites: (AHE 522 with C or better and AHE 523 [C])
AHE 525. INSTRUCTIONAL TECHNOLOGY IV. (1 Credit)
Learners will research and demonstrate how to use a current innovative instructional technology, as well as develop skills in understanding trends and preparing for future innovations in instructional technology.
Prerequisites: (AHE 522 with C or better and AHE 523 [C] and AHE 524 [C])
AHE 531. INSTRUCTIONAL DESIGN. (4 Credits)
Designed for instructors, trainers, managers, organizational consultants or others who are responsible for the development of programs and courses in community colleges, the workplace or other settings. Using systems concepts and methods, students will learn to design learner-centered instructional programs and courses.

AHE 532. PROGRAM EVALUATION. (4 Credits)
Assessing outcomes in college curriculum and workplace training programs from a systems perspective and evaluation of program effectiveness. Particular emphasis on formative and summative evaluation, frameworks for program evaluation, quantitative and qualitative methods and analysis, communicating and reporting evaluation findings, and the ethics and standards of evaluation practice.

AHE 533. NEEDS ASSESSMENT AND RESEARCH. (4 Credits)
Introduces workplace learning needs assessment (WLNA) and research principles and practices for individual and collaborative learning groups.
Prerequisites: AHE 553 with C or better

AHE 534. ORGANIZATIONS AND SYSTEMS THEORY. (4 Credits)
Introduces principles and practices underlying individual and collaborative work group learning. Participants will learn how to create an environment that promotes effective and efficient workplace learning.

AHE 547. INSTRUCTIONAL STRATEGIES FOR ADULT LEARNERS. (4 Credits)
Exploration of and practice using instructional strategies to enhance adult learning. Acquisition of an instructional strategy tool kit as well as a method for evaluating adult learning events.
This course is repeatable for 60 credits.

AHE 549. ETHICAL AND PROFESSIONAL ISSUES. (4 Credits)
Focuses on issues facing professionals working with adult learners as well as ethical issues relevant to the practice and scholarship in the field. Combines instruction in inquiry-based teaching methods and learning theory with work in professional settings, such as for-profit and non-profit organizations and government agencies.

AHE 553. ADULT LEARNING & DEVELOPMENT. (4 Credits)
Introduce participants to key theories, orientations, models, and principles of learning and development in adulthood.

AHE 557. LEADERSHIP DEVELOPMENT AND HUMAN RELATIONS. (4 Credits)
Exploration of multiple theories of leadership in different organizational contexts; synthesize theory with experience to construct a personal framework for leadership practice.

AHE 575. EDUCATIONAL FINANCE. (3 Credits)
Finance, budgeting and accounting for sources of revenue; deferral, state and local financing, budgeting and accounting models, practical experience combined with examination of theory, trends and issues. Focus in either public schools, community colleges or higher education through practical experience.

AHE 582. LEGAL ISSUES IN HIGHER EDUCATION. (3 Credits)
A comprehensive presentation and discussion of the law governing administration within community colleges and college/universities with a special emphasis on student services administration.

AHE 599. SPECIAL TOPICS. (1-16 Credits)
Equivalent to: CSSA 599
This course is repeatable for 16 credits.

AHE 601. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 602. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 603. THESIS. (1-16 Credits)
This course is repeatable for 99 credits.

AHE 605. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 606. PROJECTS. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 607. SEMINAR. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 608. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 609. PRACTICUM CLINICAL EXPERIENCE. (1-16 Credits)
This course is repeatable for 16 credits.

AHE 610. INTERNSHIP. (1-15 Credits)
This course is repeatable for 15 credits.

AHE 611. QUANTITATIVE ANALYSIS IN EDUCATIONAL RESEARCH I. (3 Credits)
Foundational course to methods and statistics used in quantitative educational research. Examines data analysis, statistical procedures, and interpretation of results within postsecondary environments.

AHE 612. RESEARCH PERSPECTIVES IN EDUCATION. (3 Credits)
Research perspectives, how they are influenced by worldviews, and how these worldviews influence research.
Recommended: AHE 562 and completion or concurrent enrollment in an introductory statistics course

AHE 613. RESEARCH ANALYSIS AND INTERPRETATION IN EDUCATION. (3 Credits)
Critical analysis of scholarly studies in education from a variety of research perspectives.
Recommended: AHE 612 and completion or concurrent enrollment in an intermediate statistics course

AHE 614. ADVANCED RESEARCH METHODS IN EDUCATION. (1-3 Credits)
Selected topics in research methods as appropriate for research perspectives in education. May be repeated.
This course is repeatable for 6 credits.
Recommended: AHE 613

AHE 615. RESEARCH ISSUES. (3 Credits)
A core course in the College of Education's doctoral program that focuses on research issues.
Prerequisites: (AHE 612 with C or better and AHE 613 [C] and AHE 614 [C])

AHE 616. QUANTITATIVE ANALYSIS IN EDUCATIONAL RESEARCH II. (3 Credits)
Develop conceptual and practical understanding of research and evaluation in higher education. Course topics include basic statistics, survey design, data analysis, and assessment issues. As an advanced statistics course, students will have the opportunity to apply concepts and gain direct research experience by conducting an original research project.
Prerequisites: AHE 611 with C or better
AHE 618. QUALITATIVE ANALYSIS IN EDUCATIONAL RESEARCH. (3 Credits)
Introduces learners to a variety of qualitative research perspectives and methodologies. Participants will examine these approaches by critiquing a scholarly article containing qualitative methods; formulating qualitative questions; writing a short proposal; collecting, coding, and analyzing data; and writing a final synthesis paper.

AHE 621. LEADERSHIP IN STUDENT SERVICES. (3 Credits)
Exploration of significant issues in design and delivery of student services in community college and higher education settings. Group discussion, model building, problem posing, issues analysis, and theory applications are employed. Students will reflect on current and future practices in student services, including emerging approaches to leadership.

AHE 638. HISTORY OF HIGHER EDUCATION. (3 Credits)
Surveys American higher education across 200-plus years of American history, with a specific emphasis in this section on the American community college.

AHE 640. HIGHER EDUCATION ADMINISTRATION. (3 Credits)
Current leadership and management theories and models, systems of organization, patterns of internal and external governance, and issues in institutional planning and advancement in higher education.

AHE 643. ORGANIZATION THEORY-HIGHER EDUCATION. (3 Credits)
An introduction to organizational theory (OT). The texts allow us to explore how systems thinking is applied to our world, and how we can use it to better understand the nature of human social engagement. Both OT and living systems theories are deeply associated with improvement and change theories in higher education settings and business.

AHE 645. ETHICAL PRACTICE. (3 Credits)
Reviews major ethical theories with an emphasis on practical applications related to community college professional practice.

AHE 653. INSTRUCTIONAL LEADER I. (3 Credits)
A core course in the College of Education's doctoral program. Introduces major theories, theorists, and theoretical principles that will assist the learner in the understanding and development of systemic frameworks for instructional leadership.

AHE 672. RESEARCH PERSPECTIVES IN FOUR-YEAR HIGHER EDUCATION. (3 Credits)
An overview of the extensive research related to four-year colleges and universities, with an emphasis on the role of research in understanding and interpreting the nature of higher education. Explore research epistemologies, theories, and approaches related to social science and higher education, and how these ideas influence worldview and subsequent research. Identify a significant research topic/problem statement which will carry forward into the second year research courses in moving toward the dissertation topic for research related to four-year higher education.

AHE 673. RESEARCH INTERPRETATION IN FOUR-YEAR HIGHER EDUCATION. (3 Credits)
Critical analysis and interpretation of journal articles and scholarly research related to a problem statement in four-year higher education organization, learning, and/or leadership. Refinement of Sections 1 (Research Focus and Problem Statement) and II (Manuscript and Literature Review) of a Dissertation Proposal in four-year higher education.

Prerequisites: AHE 672 with C or better

AHE 674. ADVANCED RESEARCH METHODS IN FOUR-YEAR HIGHER EDUCATION. (3 Credits)
Identification and evaluation of an appropriate quantitative or qualitative study focused on four-year higher education. This includes a requirement that students demonstrate the ability to analyze and interpret data associated with their research question(s) as identified in their research proposal and that they outline the methodology that will be used to answer their research question(s)/proposal.

Prerequisites: AHE 673 with C or better

AHE 675. FOUR-YEAR HIGHER EDUCATION RESEARCH ISSUES. (3 Credits)
Finalize a dissertation proposal related to a research question on four-year education institutions that reflects research epistemologies, theories and approaches. Develop a dissertation draft for review by the student's dissertation committee outlining: (a) Purpose of the student's study and its significance within the context of research on four-year colleges and universities, (b) Review of related literature on the specific topic of the dissertation, and (c) Design of the dissertation study.

Prerequisites: AHE 674 with C or better

COUN 421. PERSONAL GROWTH AND WELLNESS IN THE MODERN WORLD. (3 Credits)
Explores social and emotional adjustment, growth, and wellness within current social contexts. Examines challenges to wellness and the role of normal development, self-help, and the helping professions in the growth process.

COUN 441. INTRODUCTION TO PROFESSIONAL COUNSELING. (3 Credits)
Provides students with an overview of the counseling profession that includes the history and philosophical foundations of the profession and roles and functions of professional counselors. The course content will critically engage the privilege and responsibility of the counseling profession in a multicultural society.

COUN 501. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 502. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 503. THESIS. (1-16 Credits)
This course is repeatable for 999 credits.

COUN 505. READING AND CONFERENCE. (1-3 Credits)
This course is repeatable for 16 credits.

COUN 506. PROJECTS. (1-3 Credits)
This course is repeatable for 16 credits.

COUN 507. SEMINAR. (1-3 Credits)
This course is repeatable for 16 credits.

COUN 508. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.
COUN 509. PRACTICUM. (1-16 Credits)
Designed to develop competencies in basic skills, facilitative dimensions, and counseling process. Self-critique, peer-critique, and supervisor-critique of videotaped interview. Written self-critique, oral case presentation and charting skills are learned. Graded P/N. This course is repeatable for 16 credits.

COUN 510. INTERNSHIP. (1-18 Credits)
The internship is the culminating field experience of the MS in Counseling program. It is designed to provide students with an on-site placement in a public or private mental health or school setting that will create the necessary bridge between training and professionalism. Students are expected to function per the expectations of other full-time employees and counseling staff at the internship site. Graded P/N. This course is repeatable for 16 credits.

COUN 513. COUNSELING PRE-PRACTICUM. (3 Credits)
Designed to develop competencies in basic skills and processes. Self-critique, peer-critique, and supervisor-critique of videotaped interviews with peer clients. A pass requires at least B level work. Graded P/N. This course is repeatable for 6 credits.

COUN 514. PRACTICUM IN COUNSELING. (1-3 Credits)
Designed to develop competencies in basic skills, facilitative dimensions, and counseling process. Self-critique, peer-critique, and supervisor-critique of videotaped interview. Written self-critique, oral case presentation and charting skills are learned. A pass requires at least B level work. Graded P/N. This course is repeatable for 9 credits.

COUN 515. COUNSELING INTERNSHIP. (1-15 Credits)
The internship is the culminating field experience of the MS in Counseling program. It is designed to provide the student with an on-site placement in a public or private mental health or school setting that will create the necessary bridge between training and professionalism. Graded P/N. This course is repeatable for 24 credits.

COUN 530. FUNDAMENTALS OF COUNSELING. (3 Credits)
Exploration of basic helping processes appropriate in a variety of settings. Designed for students planning on working in a human service profession, such as counseling, teaching, nursing, medicine, law. A variety of skills and techniques are demonstrated and practiced through videotape and role play, and review of ethical standards of conduct. Equivalent to: CSSA 530

COUN 531. DEVELOPMENTAL PERSPECTIVES IN COUNSELING. (3 Credits)
A study of affective, behavioral, cognitive, physical, and moral development for human growth and maturation. Theories of personality and learning that affect normal and non-normal development. Relationship of understanding human development to the counseling profession.

COUN 532. SOCIAL AND CULTURAL PERSPECTIVES IN COUNSELING. (3 Credits)
Social and cultural factors effecting counseling. Includes studies of change, ethnic groups, subcultures, changing roles of women, sexism, urban and rural societies, population patterns, cultural mores, use of leisure time, and differing life patterns.

COUN 533. ADDICTIVE BEHAVIOR COUNSELING. (3 Credits)
Techniques for addictive behavior assessment and counseling. Specific addictions covered include substance abuse, gambling, and eating disorders.

COUN 536. APPLIED PSYCHOPHARMACOLOGY FOR COUNSELORS. (3 Credits)
Acquaints counseling students with the fundamentals of psychotropic drugs. Basics of pharmacology, adverse effects, indications, and drug interactions will be discussed. Boundaries of practice and practical issues of assessment and referral will be covered. The overall aim of the course is to provide information about psychopharmacology to the non-medical mental health care provider so that she or he can be a more informed member of the mental health care team. This course does not purport to prepare the student to be any part of the pharmacological prescriptive process. That is the purview of the medically trained person.

COUN 540. NEW VISION SCHOOL COUNSELING: ACADEMIC ACHIEVEMENT. (3 Credits)
Participants will be able to implement research-based educational practices in: 1. Individual and group academic achievement counseling. 2. Consulting with parents, teachers, and schools regarding academic achievement. 3. Utilizing culturally competent practices in addressing academic achievement issues. 4. Applying the appropriate legal and ethical guidelines to work in the academic domain.

COUN 541. THE COUNSELING PROFESSION. (3 Credits)
Provides the foundation for becoming a counselor and explores the psychological and philosophical ramifications of the counselor in a changing world. Topics will include values in counseling, ethical and legal issues in counseling, research in counseling, and maintaining a professional identity.

COUN 546. LEADERSHIP OF SCHOOL COUNSELING PROGRAMS. (3 Credits)
Designed to prepare school counselors to lead teams in the development and implementation of comprehensive school counseling programs. Principles of leadership, system change, and advocacy are introduced. State and National Comprehensive School Counseling models are examined.

COUN 548. SPECIAL EDUCATION ISSUES IN COUNSELING. (3 Credits)
Addresses various educational disability categories, the fundamentals of special education law, the special education assessment process, the special education definition of emotional/behavioral disorders, and the counselor’s role in supporting children with special emotional needs.

COUN 550. FOUNDATIONS OF MENTAL HEALTH COUNSELING. (3 Credits)
Addresses the foundations of mental health counseling: (1) historical, philosophical, societal, cultural, economic, and political dimensions of, and current trends in, the mental health movement; (2) roles, functions, preparation standards, credentialing, licensure and professional identity of mental health counselors, (3) policies, laws, legislation, recognition, reimbursement, right-to-practice, and other issues relevant to mental health counseling.

COUN 551. THEORY AND TECHNIQUES OF COUNSELING I. (3 Credits)
Basic concepts and facilitative skills of helping relationships. Introduction and overview of counseling theories and their related processes and techniques.

COUN 552. THEORY AND TECHNIQUES OF COUNSELING II. (3 Credits)
Continued development of the theories and techniques of counseling including identification of the counseling process. Emphasis on personality development and affective, behavioral and cognitive approaches.

Recommended: COUN 551
COUN 562. INTRODUCTION TO RESEARCH METHODS IN COUNSELING. (3 Credits)
An introductory course for master's level students. Explains basic evaluation, quantitative and qualitative research methods in the counseling profession; action research and the fundamental statistical procedures used in the interpretation and use of research studies.

COUN 567. APPRAISAL OF THE INDIVIDUAL. (3 Credits)
Development of framework for understanding the individual; methods for data gathering and assessment; individual and group testing; case study approaches; observational, sociometric, and environmental procedures; study of individual differences. Ethnic, cultural, and sex factors are emphasized.
Recommended: Basic statistics course.

COUN 568. LIFESTYLE AND CAREER DEVELOPMENT. (3 Credits)
Major theoretical approaches to career development; available resources for educational and occupational assessment; procedures to enhance career exploration, planning and placement. Emphasis is on the decision-making process and issues of career counseling with special populations.

COUN 571. GROUP COUNSELING PROCEDURES. (3 Credits)
A conceptual and experiential introduction to group dynamics. Group counseling approaches and models; issues of group leadership; styles of leadership and group facilitation skills. Consideration is given to group counseling goals, composition, phases and research.

COUN 575. FAMILY COUNSELING. (3 Credits)
An overview of the major theoretical approaches to family counseling will be covered. Through the use of readings, demonstrations, and videos the student will become familiar with systems foundations, the history of family counseling, family roles, interaction patterns, and decision-making processes.

COUN 577. APPLIED PSYCHOPATHOLOGY AND PSYCHODIAGNOSTICS. (3 Credits)
Addresses the principles of diagnosis of psychopathology and the use of current diagnostic tools, including the current edition of the Diagnostic and Statistical Manual (DSM). Includes psychiatric terminology, treatment, current research, cross cultural impact, ethical implications, and goal planning related to mental health processes and case management.
Recommended: COUN 541 and COUN 551 and COUN 552.

COUN 578. CRISIS, TRAUMA, AND GRIEF COUNSELING. (3 Credits)
The theory and pragmatics of crisis, trauma and grief counseling are addressed.

COUN 579. TRAUMA-INFORMED COUNSELING. (3 Credits)
Trauma-informed counseling methods for promoting client wellness and resilience are addressed.
Prerequisites: COUN 578 with C or better
Recommended: COUN 509

COUN 581. CROSS-CULTURAL COUNSELING. (3 Credits)
Cognitive and experimental study of social and psychological variables influencing the cross-cultural counseling relationship. Social and psychological experiences of selected subcultures. Relevant assessment instruments and current literature, methods and outcome studies.

COUN 582. MULTICULTURAL COUNSELING II. (3 Credits)
Further explores multicultural counseling by studying in-depth the experience of specific student populations and their unique strengths and needs. Students will gain understanding of the specialized school programs and state and national regulations that support a variety of learners as well as the theories and research related to language acquisition to support ELL and bilingual students in the PK-12 system. Students will engage in authentic experiences and assignments to enrich their understanding of sub-populations of students and their families to enhance their cultural responsiveness with those specific groups of learners.
Prerequisites: COUN 581 with C or better

COUN 591. INSTRUCTIONAL STRATEGIES FOR SCHOOL COUNSELORS. (3 Credits)
Students will gain understanding in research-based classroom teaching practices including classroom planning and evaluation. Students will refine their educational beliefs of classroom practice and gain insight into the administrative structure of public schools as it relates to the teacher and school counselor.

COUN 592. CLASSROOM INSTRUCTION FOR COUNSELORS. (3 Credits)
75 hours of supervised instruction in a public school setting.
Recommended: COUN 591.

COUN 595. GROUP COUNSELING II. (3 Credits)
Group counseling theories and pragmatics for clients with mental and emotional disorders.

COUN 597. INTRODUCTION TO COUNSELOR SUPERVISION. (3 Credits)
Introduction to the theory and pragmatics of counselor supervision.

COUN 598. COUNSELOR CONSULTATION. (3 Credits)
Development of consultation skills as a supervisor and counselor educator. Consultation theory and practice are studied. Students practice consultation skills and receive feedback.

COUN 599. SPECIAL TOPICS. (1-4 Credits)
This course is repeatable for 90 credits.

COUN 601. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 602. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 603. THESIS. (1-16 Credits)
This course is repeatable for 999 credits.

COUN 605. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 606. PROJECTS. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 607. SEMINAR. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 608. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.

COUN 609. PRACTICUM IN COUNSELING. (1-12 Credits)
Specialized counseling experiences supervised by a professional. Emphasis is on development of advanced skills in counseling specific to a population.
This course is repeatable for 16 credits.

COUN 610. INTERNSHIP IN COUNSELING. (1-15 Credits)
Designed to provide experiences in development of teaching and supervision skills in preparation as a counselor educator and supervisor.
This course is repeatable for 15 credits.
COUN 612. RESEARCH PERSPECTIVES IN EDUCATION. (3 Credits)
Research perspectives, how they are influenced by worldviews, and how these worldviews influence research.
Recommended: COUN 562 and completion or concurrent enrollment in an introductory statistics course.

COUN 613. RESEARCH ANALYSIS AND INTERPRETATION IN EDUCATION. (3 Credits)
Critical analysis of scholarly studies in education from a variety of research perspectives.
Recommended: (TCE 612 or COUN 612) and completion or concurrent enrollment in an intermediate statistics course.

COUN 614. ADVANCED RESEARCH METHODS IN EDUCATION. (1-3 Credits)
Selected topics in research methods as appropriate for research perspectives in education.
This course is repeatable for 6 credits.
Recommended: COUN 613.

COUN 616. UNIVERSITY LEVEL INSTRUCTIONAL THEORY AND METHODS. (3 Credits)
Addresses general university level instructional theory and methods as well as pedagogy specific to counselor education.

COUN 617. ADVANCED COUNSELOR SUPERVISION. (3 Credits)
Advanced theory and techniques in counselor supervision. Pedagogical issues in training supervisors are addressed.

COUN 618. PRACTICUM IN COUNSELING. (1-12 Credits)
Specialized counseling experiences supervised by a professional. Emphasis is on development of advanced skills in counseling specific to a population.
This course is repeatable for 16 credits.

COUN 619. INTERNSHIP IN COUNSELING. (1-12 Credits)
Designed to provide experiences in development of teaching and supervision skills in preparation as a counselor educator and supervisor.
This course is repeatable for 16 credits.

COUN 621. ADVANCED TOPICS IN EDUCATION. (3 Credits)
Advanced critical study of theory and research related to specific topics of counseling and counselor education.
This course is repeatable for 18 credits.

COUN 622. ADVANCED COUNSELING THEORY. (3 Credits)
The goal of this course is to develop in each student an advanced level of understanding and skill in emergent counseling models.

COUN 633. ADVANCED COUNSELING PRACTITIONER I. (3 Credits)
Assists the advanced counseling practitioner with their knowledge and skills in training, leadership, and writing.

COUN 634. ADVANCED COUNSELING PRACTITIONER II. (3 Credits)
Addresses the theory, science, pragmatics and pedagogy of evidence-based practices in professional counseling.

COUN 662. COUNSELOR EDUCATION QUANTITATIVE RESEARCH METHODS I. (3 Credits)
Part I of a three-course sequence designed to prepare students to meet the CACREP doctoral standards for quantitative research methods in counselor education. Topics addressed in course I include application of the following in counselor education research: (1) data scales and scale transformation, (2) frequency distributions and histograms, (3) measures of central position, (4) variability, (5) characteristics of data curves, (6) normality, (7) measures of variability, (8) the statistical hypothesis, (9) statistical errors (Type I/Type II), (10) power analysis, and (11) statistical correlation.
Recommended: COUN 562.

COUN 663. COUNSELOR EDUCATION QUANTITATIVE RESEARCH METHODS II. (3 Credits)
Part II of a three-part course sequence designed to prepare students to meet the CACREP doctoral standards for quantitative research methods in counselor education. Topics addressed in course II include application of the following in counselor education research: (1) a review of the dependent variable, normal curve, Type I and Type II errors, power analysis, and criteria for selecting statistical tools, (2) significance tests, including Chi-square t-test, one-factor analysis of variance, multiple comparison tests (L.S.D. and Tukey’s HSD), two-factor analysis of variance, statistical interaction (ordinal and disordinal), linear regression, factor analysis, and analysis of covariance.

COUN 664. COUNSELOR EDUCATION QUANTITATIVE RESEARCH METHODS III. (3 Credits)
Part III of a three-course sequence designed to prepare students to meet the CACREP doctoral standards for quantitative research methods in counselor education. Topics addressed in course III include application of the following in counselor education research: (1) multiple regression, (2) path analysis, (3) confirmatory factor analysis, analysis, (4) logistic regression, (5) reliability and generalizability theory, (6) cluster analysis, (7) structural equation modeling, and (8) single subject designs.

COUN 665. PUBLICATION METHODS IN COUNSELOR EDUCATION. (3 Credits)
Teaches doctoral students how to write theses, grant reports, peer-reviewed journal articles, and textbook chapters.

COUN 666. ADVANCED ASSESSMENT IN COUNSELING. (3 Credits)
Explores current issues in the use of assessment in counseling, best practices in instrument development, and best practices in assessment pedagogy.

COUN 668. ADVANCED CAREER DEVELOPMENT AND CONSULTATION IN COUNSELING. (3 Credits)
An advanced course surveying past, current, and possible future technical and philosophical perspectives concerning career development and counseling. Issues in consultation, social change theory, and advocacy action planning are also reviewed in light of their impact on future counseling practitioners. Pedagogical methods for presenting current issues in career development, consultation, social change theory and advocacy action planning are a major focus of the class.
Recommended: COUN 568 and COUN 598.

COUN 671. ADVANCED GROUP COUNSELING. (3 Credits)
Provides learning experiences beyond the entry level in group counseling. Theoretical and pedagogical innovations in this area are discussed.
ED 299. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.

ED 309. FIELD PRACTICUM. (3-6 Credits)
Placement in either an elementary, middle or secondary school. To assist
students to develop competencies in dealing with children or adolescents
according to the individual major of the university student.
This course is repeatable for 18 credits.

ED 340. *SUPPORTIVE DIFFERENTIATED ENVIRONMENTS. (3 Credits)
Addresses special abilities and needs of learners and helps prepare
teachers to develop strategies and instructional practices for diverse
learners and students with exceptionalities in a supportive and inclusive
classroom. (Writing Intensive Course)
Attributes: CWIC – Core, Skills, WIC

ED 394. DIFFERENTIATION IN THE ELEMENTARY CLASSROOM. (2
Credits)
The role of culture, language, and group identification in learning will be
examined and applied to the consideration of differentiated instructional
strategies in grades K-5. Students will learn strategies teachers use to
help differentiate instruction to meet the diverse needs of students in the
elementary classroom.

ED 399. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.

ED 401. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

ED 402. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.

ED 403. THESIS. (1-16 Credits)
This course is repeatable for 16 credits.

ED 405. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

ED 406. PROJECTS. (1-3 Credits)
This course is repeatable for 16 credits.

ED 407. SEMINAR. (1-16 Credits)
Equivalent to: ED 407H
This course is repeatable for 16 credits.

ED 408. WORKSHOP. (1-3 Credits)
Equivalent to: ED 408H
This course is repeatable for 16 credits.

ED 409. PRACTICUM/CLINICAL EXPERIENCE. (1-16 Credits)
This course is repeatable for 16 credits.

ED 410. INTERNSHIP/WORK EXPERIENCE. (1-18 Credits)
This course is repeatable for 18 credits.

ED 411. EDUCATIONAL PSYCHOLOGY, LEARNING AND DEVELOPMENT.
(3 Credits)
An opportunity to begin the transition from student to teacher. Explores
the relationship between human development and learning through the
life cycle.
ED 412. LEARNING STYLES AND NEEDS IN ADOLESCENCE. (2 Credits)
Exploration of the particular learning styles and needs of the adolescent, major and emerging learning theories, individual learning styles including one’s own learning styles, self-reflection on implications of how learning occurs, and the impact of these issues on the development and delivery of instruction.

ED 413. LEARNING ENVIRONMENTS I: FOSTERING CLASS ENGAGEMENT. (3 Credits)
Creating a positive culture in the classroom, managing student behavior, and engaging students in critical learning discourse are challenges faced by all educators. Students will learn to develop the components of a productive and safe learning environment.

ED 414. LEARNING ENVIRONMENTS II: ADVANCING EVERY STUDENT. (2 Credits)
Students will expand their knowledge about constructing a positive K-12 classroom environment to a productive learning environment accommodated to fit the needs of a diversified student population.
Prerequisites: ED 413 with D- or better

ED 420. CLASSROOM MANAGEMENT. (3 Credits)
Build knowledge and learn techniques for cultivating a positive learning environment and for managing classrooms. Learn through examining the literature and observing relevant learning environments and classrooms. Explore factors that influence student behavior, including those associated with social and/or multicultural student populations.

ED 424. TEACHER AS REFLECTIVE PRACTITIONER. (2-3 Credits)
Designed to help teachers make complex judgments based upon their knowledge and understanding of their students, the curriculum, and larger social and cultural issues through reflective practice. Problem solving related to teaching with strong focus on generating new knowledge about teaching, learning, and assessment.
Prerequisites: ED 407 with D- or better or TCE 407 with D- or better
This course is repeatable for 3 credits.

ED 425. CURRICULUM IMPLEMENTATION AND INSTRUCTIONAL STRATEGIES 7-12. (4 Credits)
The relationship of theory to practice in teaching the content areas in grades 7-12 is examined. General curriculum trends as well as content selection in specific endorsement/subject areas are explored. This course is preparation for and is coordinated with part-time student teaching.

ED 427. ALTERNATIVE ASSESSMENT FOR MIDDLE AND HIGH SCHOOL. (2 Credits)
Introduces methods of assessment that encourage effective learning. Students will design assessments aligned to national, state, and local standards as they prepare and implement a teaching unit in their practicum. Taken concurrently with TCE 410, Part-Time Student Teaching in Middle or High School.
Recommended: ED 491 or ED 494

ED 429. CURRICULUM, INSTRUCTION, AND ASSESSMENT FOR CTE. (3 Credits)
Build knowledge and skills in curriculum design, instructional strategies, and assessment for successful teaching in a Career and Technical Education and other specialty areas: (a) Agriculture Food and Natural Resource Systems, (b) Arts, Information and Communications, (c) Business Management, (d) Health Sciences (e) Human Resources, (f) Industrial and Engineering Systems, (g) Family and Consumer Sciences, (h) Career Trades.

ED 440. HUMAN DEVELOPMENT AND PSYCHOLOGY OF THE ADOLESCENT. (3 Credits)
Examines research from psychology, human development, and neuroscience to provide a holistic understanding of adolescents and learning with a focus on the middle/secondary student. Investigates the influence of family, neighborhood, peer, and school contexts on brain development; identity formation; and the challenges and opportunities of adolescence.

ED 450. FOUNDATIONS OF EDUCATION AND PLANNING. (4 Credits)
The first of three courses examining the iterative cycle of curriculum planning, instruction and assessment. An introduction to learning theory and the relationship between teaching and learning provide the foundation. An overview of the complete teaching cycle leads to a focus on curriculum planning based on state standards.

ED 451. ASSESSMENT. (4 Credits)
Assessment for and of learning and its importance to student engagement and advancement. Formal and informal writing derived from multiple revisions will result in documents intended for different audiences including parents, school administrators, and national assessment prompts citing research-based practices.
Attributes: CWIC – Core, Skills, WIC
Prerequisites: ED 450 with C or better

ED 452. USING DATA TO SUPPORT ALL STUDENTS. (3 Credits)
Teacher candidates will gather and analyze student data to inform instructional practice devoted to enhancing student learning; develop data literacy skills; differentiate instruction for targeted groups and individualized student learners while continuing to foster higher-order thinking and communication skills in the whole class: analyze patterns and gaps in individualized student learning; apply differentiated instruction and assessment strategies to support student growth; engage learners in goal setting; and identify teaching and assessment strategies to work with students with exceptional needs.
Prerequisites: ED 451 with C or better

ED 456. STRATEGIES FOR TEACHING LANGUAGE ARTS AND SOCIAL STUDIES. (3 Credits)
Exploration of language arts and social studies programs (e.g., children’s literature, writing, special needs, spelling, and cultural factors). Development of research-based teaching strategies and assessment. Focuses on the development of inquiry approaches that reflect interdisciplinary curriculum as well as subject-specific pedagogy in the teaching of both social studies and language arts.
Recommended: ED 216 and ED 219 and ED 253

ED 457. TEACHING ELEMENTARY MATHEMATICS FOR UNDERSTANDING. (3 Credits)
Part of the Education Double Degree. Explores the teaching of mathematics in K-8 classrooms in a manner consistent with state and national standards. Students learn teaching strategies that incorporate the development of mathematical models and mental constructs.
Recommended: MTH 211 and MTH 212 and MTH 390

ED 458. STRATEGIES FOR TEACHING WELLNESS AND FINE ARTS. (2 Credits)
Exploration of recent trends and research-based practices in the teaching of wellness, physical education, and fine arts. Includes strategies, assessments, special needs, integrating curriculum through developmentally appropriate practices, content standards, and the value of developing holistic learners through an effective wellness and fine arts program.
Recommended: ED 216 and ED 219 and ED 253
ED 465. ELEMENTARY METHODS: LITERACY. (4 Credits)
Understanding the theoretical and developmental foundations for literacy programs K-5; targeted reading, writing, listening, vocabulary, and speaking skill needs assessments; organizational strategies for teaching literacy; understanding dyslexia and how to differentiate instruction for students with dyslexia; and the integration of cultural diversity and social justice into literacy learning.

ED 466. ELEMENTARY METHODS II: MATHEMATICS. (4 Credits)
Exploration of the teaching of early childhood/elementary school mathematics with emphases on problem solving, connections, representation, communication, reasoning and proof. Course will incorporate the development of mathematical models and mental constructs. Research-based, developmentally appropriate and culturally relevant practices will be incorporated into lessons.

ED 467. ELEMENTARY METHODS III: NATURAL AND SOCIAL SCIENCE. (4 Credits)
Inquiry approaches to the teaching and learning of the natural and social sciences are used to explore the structure of the disciplines and support the creation of instructional units that develop disciplinary knowledge and practices/skills while highlighting cross-cutting themes. Scientific literacy and civic competence are emphasized.

ED 468. ELEMENTARY METHODS IV: LANGUAGE ARTS. (4 Credits)
This course will build on ED 465: Elementary Methods I: Literacy. Development of pedagogy in teaching of reading to elementary-aged students, including the teaching of vocabulary, comprehension, phonics, fluency and motivation to read. Use of children's literature, assessment approaches, and special needs students are also addressed. Students will gain a deeper level of understanding in how to differentiate the teaching of reading at grades K-5, how to run a Writers' Workshop, and how to integrate literacy into other content areas.
Prerequisites: ED 465 with C or better

ED 470. BILITERACY INSTRUCTION. (3 Credits)
Explores literacy development in Spanish and English. Examines differences in literacy development across the two languages, as well as pedagogical approaches that leverage students' home language and literacy practices. Explores equity and bias in classroom language practices. Taught bilingually in Spanish and English.
Prerequisites: ED 472 (may be taken concurrently) with C or better

ED 471. MULTILINGUAL LINGUISTICS. (3 Credits)
Explores linguistic categories: phonology, morphology, syntax, semantics, pragmatics, and discourse. Focuses on academic language development and teaching implications for emergent bilingual students in Spanish-English K-12 dual language programs. Taught bilingually in Spanish and English.
Prerequisites: ED 472 (may be taken concurrently) with C or better

ED 472. FOUNDATIONS OF ESOL EDUCATION. (3 Credits)
Examines characteristics of English language learners (ELLs), key theories in language acquisition, the role of culture in language development, and instructional program models for ELLs, while considering implications for classroom instruction.

ED 473. INSTRUCTIONAL APPROACHES FOR ESOL EDUCATION. (3 Credits)
Examines characteristics of standards-based content-area instruction for emergent bilinguals. Includes integration of content and language development, classroom-based assessment, and use of technology to support student learning.
Prerequisites: ED 472 with C or better

ED 474. PROJECT-BASED MATHEMATICS. (3 Credits)
Building on the foundational concepts covered in ED 457 and ED 466/ED 566, students will plan and apply project-based lessons. Students will transfer knowledge and skills of mathematics to real world problems and will learn to teach with a project-based approach.

ED 475. INTEGRATED STEM. (3 Credits)
Students will continue to develop their pedagogical content knowledge in science, technology, engineering, mathematics, and integrated STEM. Students will develop a deeper understanding of the crosscutting concepts common to all science endeavors and will learn how to use these concepts to bridge across science or STEM curriculum units. Students will also examine and develop expertise in using science and engineering practices to lead students in authentic inquiry. Integrating crosscutting concepts, science and engineering practices, and disciplinary core ideas, students will learn and practice the development of curriculum and instruction utilizing the engineering design process.

ED 476. PARTNERSHIPS AND IDEOLOGIES IN ESOL EDUCATION. (3 Credits)
Considers social and political issues pertaining to educating English language learners. Focuses on exploring multiple ideologies in ESOL and building partnerships across schools, families, and communities.
Prerequisites: ED 472 with C or better

ED 477. DIFFERENTIATION FOR STUDENTS WITH SPECIAL NEEDS. (3 Credits)
Building on the foundational concepts covered in HDF5 431, this course goes into greater depth on how to provide students with a range of exceptionalities with education in the least restrictive environment. Teacher candidates will explore differentiated instruction techniques for students with special needs that can be used in both the regular education and pull out Special Education resource classrooms.

ED 478. SPECIAL EDUCATION LAW RIGHTS AND REGULATIONS. (3 Credits)
In-depth review of special education law and regulations that protect and provide educational rights for students with disabilities. Teacher candidates will leave the class understanding both the historical and current legal rights of students receiving special education and how to best meet those rights in both the regular and special education resource classrooms.

ED 479. LINGUISTICS FOR TEACHERS. (3 Credits)
Explores linguistic categories: phonology, morphology, syntax, semantics, pragmatics, and discourse. Focuses on teaching implications—from psycholinguistic, sociolinguistic, and critical perspectives—for emergent bilingual students in P-12 contexts.
Prerequisites: ED 472 with C or better

ED 480. TEACHING MATH TO SECONDARY LEARNERS IN CONTEXT. (3 Credits)
Enhance and reinforce mathematics embedded within occupational-specific curricula taught at the secondary level to prepare Career and Technical Education teachers for licensure.

ED 481. READING AND WRITING FOR SECONDARY LEARNERS IN CONTEXT. (3 Credits)
Enhance and reinforce the authentic reading and writing embedded within occupationally relevant materials to prepare Career and Technical Education teachers for licensure.
ED 483. DEVELOPMENTAL READING. (3 Credits)
Development of pedagogy in teaching of reading to elementary-aged students, including teaching of vocabulary, comprehension, phonics, fluency and motivation to read. Use of children’s literature, assessment approaches, and special needs students are also addressed. This is a PTCE course in the elementary Double Degree Program.

ED 484. INTRODUCTION TO CAREER AND TECHNICAL EDUCATION. (3 Credits)
A study of the history of Career and Technical Education, the impact of the educational reform on Career and Technical Education and workforce development. Topics include leaders in vocational education; legislative initiatives, social issues, and organizations involved in and impacting Career and Technical Education.

ED 492. TECHNOLOGY TOOLS FOR TEACHING. (2 Credits)
Teacher candidates will learn the technology skills needed to be successful as a classroom teacher. Topics range from exploration of how digital tools can be used in instruction, assessment, communication, and collaboration in educational settings to bring vibrant energy into student learning and engagement. The course also covers responsible digital citizenship, responsible use and ethics of technology in the classroom.

ED 493. READING, LITERATURE, AND LANGUAGE DEVELOPMENT IN THE CONTENT. (2 Credits)
Examination of reading, literature, and language development methods that can be used by middle school and high school teachers to support students’ learning of content area information. Development of specific reading strategies in content areas.

ED 494. CONTENT STANDARDS AND CURRICULUM DEVELOPMENT FOR HIGH SCHOOL. (3 Credits)
Exploration of content standards, materials and methods appropriate for high school students. Develops skills in work sample methodology through the design of effective instruction, integrating a variety of methods with existing understandings of content area, how people learn, and the diverse communities in which they work.

ED 496. TECHNOLOGY FOR EDUCATORS. (3 Credits)
Explore the integration of current and emerging technologies into K-12 content areas by engaging learners in real world issues and learning in a social context. Integrate technologies that promote critical thinking, communication, collaboration, and creativity. Discuss technologies in terms of cultural linguistic diversity. Gain transferable skills. Taught via Ecampus only.
Recommended: Basic computer literacy.

ED 499. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.

ED 501. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

ED 502. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.

ED 503. THESIS. (1-16 Credits)
This course is repeatable for 999 credits.

ED 505. READING & CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

ED 506. PROJECTS. (1-3 Credits)
This course is repeatable for 16 credits.

ED 507. SEMINAR. (1-16 Credits)
This course is repeatable for 16 credits.

ED 508. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.

ED 509. PRACTICUM. (1-16 Credits)
This course is repeatable for 16 credits.

ED 510. INTERNSHIP. (1-18 Credits)
By special permission and arrangement.
This course is repeatable for 40 credits.

ED 513. LEARNING ENVIRONMENTS I: FOSTERING CLASS ENGAGEMENT. (3 Credits)
Creating a positive culture in the classroom, managing student behavior, and engaging students in critical learning discourse are challenges faced by all educators. Students will learn to develop the components of a productive and safe learning environment.

ED 514. LEARNING ENVIRONMENTS II: ADVANCING EVERY STUDENT. (2 Credits)
Students will expand their knowledge about constructing a positive K-12 classroom environment to a productive learning environment accommodated to fit the needs of a diversified student population.
Prerequisites: ED 513 with B or better

ED 515. LEARNING ENVIRONMENTS III: CULTURES AND COMMUNITIES. (2 Credits)
The third in a series of courses to assist the Teacher candidate in developing a classroom culture of learning that challenges every student to succeed and thrive. Teacher candidates will understand the important role that culture and community play in the teaching and learning process, and develop culturally responsive teaching practices.
Prerequisites: ED 513 with B or better and ED 514 [B]

ED 517. ACADEMIC WRITING FOR MASTER’S STUDENTS. (1 Credit)
A writing refresher that addresses academic voice, style, tone, construction, conventions, and writing style appropriate for master’s-level research papers and capstones. This course is repeatable for 2 credits.

ED 518. PROFESSIONAL PRACTICE IN THE TEACHING COMMUNITY. (2 Credits)
The professional themes of communication, collaboration, reflection, knowledge of learners, professional ethics, social justice and cultural understanding will be explored and applied to teaching contexts, behaviors, dispositions, and actions.

ED 519. CAPSTONE: TEACHING AS A PROFESSION. (3 Credits)
Capstone course for the MAT in which teacher candidates further develop their educational philosophy and analyze their professional growth in alignment with national standards.

ED 520. CLASSROOM MANAGEMENT. (3 Credits)
Build knowledge and learn techniques for cultivating a positive learning environment and for managing classrooms. Learn through examining the literature and observing relevant learning environments and classrooms. Explore factors that influence student behavior, including those associated with social and/or multicultural student populations.

ED 521. FUNDS OF KNOWLEDGE IN EDUCATION. (3 Credits)
An introduction to multicultural education and developing cultural competence by using a funds of knowledge approach. This approach helps educators combine fieldwork and ethnographic research methods to gain cultural competence about the students they serve. Educators explore their own funds of knowledge as well as the children's through exploring their community and developing activities centered on children's own connections and resources.
ED 522. RACIAL AND CULTURAL HARMONY IN THE K-12 CLASSROOM. (3 Credits)
An overview of many issues relevant to the increasingly diverse student population in public schools today. It explores how a culturally competent perspective can be incorporated into curriculum design, teaching strategies, and interactions with students and parents. The course is both self-directed and communal, requiring students to respond to the materials and each other, yet at their own pace.

ED 524. TEACHER AS REFLECTIVE PRACTITIONER. (2-3 Credits)
Designed to help teachers make complex judgements based upon their knowledge and understanding of their students, the curriculum, and larger social and cultural issues through reflective practice. Problem solving related to teaching with strong focus on generating new knowledge about teaching, learning, and assessment.

ED 528. ASSESSMENT FOR LEARNING. (3 Credits)
Applies the formative learning cycle to through development of an assessment plan. Examines various formative assessment practices that promote higher order thinking and empower students to show evidence of their learning through self-assessment and feedback.

ED 531. SCIENCE METHODS I: INQUIRY AND THE NATURE OF SCIENCE. (4 Credits)
Introduction to (1) fundamentals of science teaching including the nature of science and inquiry, (2) designing instructional sequences and selecting curriculum resources aligned to state science standards and research-based learning progressions, (3) effective teaching moves, (4) supporting acquisition of academic language, and (5) productive and safe science learning environments.
Equivalent to: SED 513

ED 532. SCIENCE METHODS II: SUPPORTING STUDENTS’ CONCEPTUAL CHANGE. (4 Credits)
Development of skill in identifying and addressing misconceptions or naive conceptions as part of the individualized conceptual change process. Integration of technology tools for instruction and assessment. Development of high-leverage science teaching practices with a focus on enhancing classroom discourse and evidence-based argumentation with a survey of science curriculum models.
Prerequisites: ED 531 with B or better

ED 533. SCIENCE METHODS III: SCIENCE FOR ALL LEARNERS. (4 Credits)
Teaching science as a community of practice means addressing the needs of all learners, particularly those underrepresented in science. Uses technology to enhance high-leverage teaching practices and practices safe and effective laboratory teaching methods. Explores contextualized and interdisciplinary approaches to science education.
Prerequisites: ED 531 with B or better and ED 532 [B]

ED 537. MATHEMATICAL METHODS I: FOUNDATIONS OF NUMERICAL THOUGHT. (4 Credits)
Introduction to the fundamentals of mathematics teaching including the nature and goals of mathematical thinking, numeracy, inquiry, and related academic language of mathematics. Students are introduced to the high high-leverage practices of ambitious mathematics teaching, designing instructional sequences and selecting curriculum resources aligned to state science standards and research-based learning progressions.
Equivalent to: SED 514

ED 538. MATHEMATICS METHODS II: CYCLES OF ENACTMENT. (4 Credits)
Teacher candidates create instructional units based on student knowledge and skill while attending to needed accommodations. Designed to help the teacher candidate select or modify instructional materials based on student prior knowledge, experience, and interests; make accommodations for students; and provide for multiple representations across a unit of instruction.
Prerequisites: ED 537 with B or better

ED 539. MATHEMATICAL METHODS III: MATHEMATICS FOR EVERY LEARNER. (4 Credits)
Teacher candidates will develop practices that support all students, regardless of background or ability. The teacher candidate will design a unit of instruction with complex learning goals that are cross- and multi-disciplinary, draw on multiple perspectives, and invoke higher order thinking and communication skills.
Prerequisites: ED 537 with B or better and ED 538 [B]

ED 540. HUMAN DEVELOPMENT AND PSYCHOLOGY OF THE ADOLESCENT. (3 Credits)
Examines research from psychology, human development, and neuroscience to provide a holistic understanding of adolescents and learning with a focus on the middle/secondary student. Investigates the influence of family, neighborhood, peer, and school contexts on brain development; identity formation; and the challenges and opportunities of adolescence.

ED 542. TEACHER LEADERSHIP. (3 Credits)
Examines current conceptions, research, and philosophies of educational leadership. The goal is to promote teacher-leadership in effective teaching and learning and influence in local educational policies and programs.

ED 544. TEACHING CRITICAL LITERACY. (3 Credits)
Examines literacy curriculum and teaching practices in various real world contexts, such as critical literacy, supporting second language learners, argumentation, reading engagement and social justice. While still addressing technical dimensions of literacy education, students write critical literacy curricula, take turns leading critical book discussions, and learn to critique text bias. Course challenges students to develop critical consciousness as teachers of literacy in a democracy.

ED 548. STUDENTS WITH SPECIAL NEEDS. (2 Credits)
Explores the broad range of special needs that are represented in today’s classrooms. Addresses various types and characteristics of disabilities as well as collaborating with specialists and families with children with special needs. Discussion strategies and instructional practices to enhance the learning of diverse students in the inclusive classroom.

ED 549. TEACHING IN A DIFFERENTIATED AND DIVERSE CLASSROOM. (3 Credits)
Addresses the philosophical framework, strategies, and assessment of differentiation to meet the needs of all students in the classroom.

ED 550. THE EFFECTIVE TEACHING CYCLE I: FOUNDATIONS AND PLANNING. (4 Credits)
The first of three courses examining the iterative cycle of curriculum planning, instruction, and assessment. An introduction to learning theory and the relationship between teaching and learning provides the foundation. An overview of the complete teaching cycle leads to a focus on curriculum planning based on state standards.
ED 551. THE EFFECTIVE TEACHING CYCLE II: ASSESSMENT. (4 Credits)
The second of three courses examining the iterative cycle of curriculum planning, instruction, and assessment. Learning in this class will concentrate on assessment for and of learning and its importance to student engagement and advancement.
Prerequisites: ED 550 with B or better

ED 559. STRATEGIES FOR TEACHING HUMANITIES. (3 Credits)
Pedagogical approaches to teaching language arts and social studies in K-5, multiple subject classrooms. Focus on developing research-based daily lessons and unit plans that integrate curriculum, support national standards, and use an inquiry approach for student learning.

ED 560. CHANGES IN ESOL EDUCATION. (3 Credits)
Explores recent developments in education for K-12 emergent bilingual students, examining changes in theory, policy, and instruction. Practice-based projects draw on new language acquisition theories to address both language and content-knowledge development. Course work intended for K-12 teachers who earned an ESOL endorsement more than five years ago, as well as those with equivalent background knowledge.
Recommended: K-12 teaching license with ESOL endorsement

ED 561. ACTION RESEARCH. (1-3 Credits)
Examines action research as a vehicle for teacher and administrator professional development. Specific topics of study include problem posing, data collection and analysis, theory building, and writing the report.
This course is repeatable for 3 credits.

ED 562. INTRODUCTION TO EDUCATIONAL RESEARCH. (3 Credits)
Explores the purpose and use of social science research in education with emphasis on action and applied research. Designed to help teachers and informal educators to critically read, interpret, and apply research findings to the diverse contexts in which they work, and to become informed consumers of educational research.

ED 565. ELEMENTARY METHODS: LITERACY. (4 Credits)
Understanding the theoretical and developmental foundations for literacy programs K-5; targeted reading, writing, listening, vocabulary, and speaking skill needs assessments; organizational strategies for teaching literacy; understanding dyslexia and how to differentiate instruction for students with dyslexia; and the integration of cultural diversity and social justice into literacy learning.

ED 566. ELEMENTARY METHODS: MATHEMATICS. (4 Credits)
Exploration of the teaching of early childhood/elementary school mathematics with emphases on problem solving, connections, representation, communication, reasoning and proof. Course will incorporate the development of mathematical models and mental constructs. Research-based, developmentally appropriate and culturally relevant practices will be incorporated into lessons.

ED 567. ELEMENTARY METHODS: NATURAL AND SOCIAL SCIENCE. (4 Credits)
Inquiry approaches to the teaching and learning of the natural and social sciences are used to explore the structure of the disciplines and support the creation of instructional units that develop disciplinary knowledge and practices/skills while highlighting cross-cutting themes. Scientific literacy and civic competence are emphasized.

ED 570. BILITERACY INSTRUCTION. (3 Credits)
Explores literacy development in Spanish and English. Examines differences in literacy development across the two languages, as well as pedagogical approaches that leverage students’ home language and literacy practices. Explores equity and bias in classroom language practices. Taught bilingually in Spanish and English.
Prerequisites: ED 572 (may be taken concurrently) with C or better

ED 571. MULTILINGUAL LINGUISTICS. (3 Credits)
Explores linguistic categories: phonology, morphology, syntax, semantics, pragmatics, and discourse. Focuses on academic language development and teaching implications for emergent bilingual students in Spanish-English K-12 dual language programs. Taught bilingually in Spanish and English.
Prerequisites: ED 572 (may be taken concurrently) with C or better

ED 572. FOUNDATIONS OF ESOL EDUCATION. (3 Credits)
Examines characteristics of English language learners (ELLs), key theories in language acquisition, the role of culture in language development, and instructional program models for ELLs, while considering implications for classroom instruction.

ED 573. INSTRUCTIONAL APPROACHES FOR ESOL EDUCATION. (3 Credits)
Examines characteristics of standards-based content-area instruction for emergent bilinguals. Includes integration of content and language development, classroom-based assessment, and use of technology to support student learning.
Prerequisites: ED 572 with C or better

ED 574. PROJECT-BASED MATHEMATICS. (3 Credits)
Building on the foundational concepts covered in ED 457 and ED 466/ED 574, students will plan and apply project-based lessons. Students will transfer knowledge and skills of mathematics to real world problems and will learn to teach with a project-based approach.

ED 575. INTEGRATED STEM. (3 Credits)
Students will continue to develop their pedagogical content knowledge in science, technology, engineering, mathematics, and integrated STEM. Students will develop a deeper understanding of the crosscutting concepts common to all science endeavors and will learn how to use these concepts to bridge across science or STEM curriculum units. Students will also examine and develop expertise in using science and engineering practices to lead students in authentic inquiry. Integrating crosscutting concepts, science and engineering practices, and disciplinary core ideas, students will learn and practice the development of curriculum and instruction utilizing the engineering design process.

ED 576. PARTNERSHIPS AND IDEOLOGIES IN ESOL EDUCATION. (3 Credits)
Considers social and political issues pertaining to educating English language learners. Focuses on exploring multiple ideologies in ESOL and building partnerships across schools, families, and communities.
Prerequisites: ED 572 with C or better

ED 577. DIFFERENTIATION FOR STUDENTS WITH SPECIAL NEEDS. (3 Credits)
Building on the foundational concepts covered in HDFS 431, this course goes into greater depth on how to provide students with a range of exceptionality with education in the least restrictive environment. Teacher candidates will explore differentiated instruction techniques for students with special needs that can be used in both the regular education and pull out Special Education resource classrooms.
ED 578. SPECIAL EDUCATION LAW RIGHTS AND REGULATIONS. (3 Credits)
In-depth review of special education law and regulations that protect and provide educational rights for students with disabilities. Teacher candidates will leave the class understanding both the historical and current legal rights of students receiving special education and how to best meet those rights in both the regular and special education resource classrooms.

ED 579. LINGUISTICS FOR TEACHERS. (3 Credits)
Explores linguistic categories: phonology, morphology, syntax, semantics, pragmatics, and discourse. Focuses on teaching implications—from psycholinguistic, sociolinguistic, and critical perspectives—for emergent bilingual students in P-12 contexts.
Prerequisites: ED 572 with C or better

ED 582. STRATEGIES FOR DEVELOPING LITERACY. (3 Credits)
Focus on teaching of reading to K-5 students. Instruction in pedagogical techniques and assessment on teaching vocabulary, comprehension, phonics and fluency. Strategies related to motivation to read, integration of cultural diversity and social justice and the needs of diverse learners in literacy development are also addressed.

ED 584. LANGUAGE ARTS METHODS I: ADOLESCENT LITERACY. (4 Credits)
Teaching language arts to middle and high school students requires a deep understanding of how reading and writing to learn occur. Guided by current professional and state literacy standards, students will learn to assess and advance adolescent reading comprehension, and writing and speaking skills.

ED 585. LANGUAGE ARTS METHODS II: STRATEGIES FOR GRADES 5-12. (4 Credits)
Explores the integration and implementation of curriculum and high leverage instructional practices that respond to the learning needs of adolescents in language arts classrooms. Examines the importance of metacognitive strategies in the teaching of content-related skills and concepts, and how to create school cultures that support high achievement.

ED 586. LANGUAGE ARTS METHODS III: CURRICULUM AND THE PROFESSION. (4 Credits)
Learning to teach language arts as a community of practice including the development of high-leverage instructional practices. Focus on enhancing classroom discourse and building student comprehension, meaning construction, interpretation, and response to complex text. Integration of technology tools for instruction and assessment.
Prerequisites: ED 584 with B or better and ED 585 [B]

ED 587. SOCIAL STUDIES METHODS I: ADOLESCENT LITERACY. (4 Credits)
Teaching social studies to middle and high school students requires a deep understanding of how reading and writing to learn occur. Guided by current professional and state literacy standards, students will learn to assess and advance adolescent content reading comprehension, writing and speaking skills.

ED 588. SOCIAL STUDIES METHODS II: STRATEGIES FOR GRADES 5-12. (4 Credits)
Explores the integration and implementation of curriculum and high leverage instructional practices that respond to the learning needs of adolescents in secondary social studies classrooms. Examines the importance of metacognitive strategies in the teaching of content-related skills and concepts, and how to create school cultures that support high achievement.

ED 589. SOCIAL STUDIES METHODS III: CURRICULUM AND THE PROFESSION. (4 Credits)
Learning to teach social studies as a community of practice including the development of high-leverage instructional practices. Focus on curriculum strategies that provide opportunities for learners to develop and use facts, concepts, interpretations, and analyses to build and support arguments. Integration of technology tools for instruction and assessment.
Prerequisites: ED 587 with B or better and ED 588 [B]

ED 590. SOCIAL JUSTICE IN EDUCATION. (3 Credits)
Examines social, environmental and ecological justice in educational settings focusing on bias critique in text, development of social justice curriculum, and creation of an action related to a social justice issue. The interconnectedness of social and ecological justice is also explored. Various international justice standards are used to ground students’ work in curriculum development.

ED 592. TECHNOLOGY TOOLS FOR TEACHING. (2 Credits)
Teacher candidates will learn the technology skills needed to be successful as a classroom teacher. Topics range from exploration of how digital tools can be used in instruction, assessment, communication, and collaboration in educational settings to bring vibrant energy into student learning and engagement. The course also covers responsible digital citizenship, responsible use and ethics of technology in the classroom.

ED 594. DIFFERENTIATION. (2 Credits)
Issues of K-12 learner and the role of culture, language, and group identification in learning will be examined and applied to the consideration of differentiated instructional strategies.

ED 595. EDUCATIONAL DEVELOPMENT. (2 Credits)
Issues of K-12 learner social/emotional/cognitive development across multiple areas of learning will be examined, with consideration given to impact on classroom pedagogy.

ED 596. TECHNOLOGY FOR EDUCATORS. (3 Credits)
Explore the integration of current and emerging technologies into K-12 content areas by engaging learners in real world issues and learning in a social context. Integrate technologies that promote critical thinking, communication, collaboration, and creativity. Discuss technologies in terms of cultural linguistic diversity. Gain transferable skills. Taught via Ecampus only.
Recommended: Basic computer literacy.

ED 597. K-5 STEM INTEGRATION IN DIVERSE CLASSROOMS. (2 Credits)
An investigation of theory and practice related to science teaching and learning in diverse classrooms through integration of science, math, literacy and social studies.

ED 599. SPECIAL TOPICS. (1-4 Credits)
This course is repeatable for 90 credits.

ED 601. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

ED 602. INDEPENDENT STUDY. (1-16 Credits)
This course is repeatable for 16 credits.

ED 603. THESIS. (1-16 Credits)
This course is repeatable for 999 credits.

ED 605. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

ED 606. PROJECTS. (1-16 Credits)
This course is repeatable for 16 credits.

ED 607. SEMINAR. (1-16 Credits)
This course is repeatable for 16 credits.
ED 608. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.

ED 609. PRACTICUM/CLINICAL EXPERIENCE. (1-16 Credits)
This course is repeatable for 16 credits.

ED 610. INTERNSHIP. (1-15 Credits)
This course is repeatable for 15 credits.

ED 650. EQUITY AND EDUCATION POLICY. (3 Credits)
Introduces students to key educational policy debates, with a particular focus on attempts to use education policy to advance equity. Examines different visions for the purpose of education and different definitions of equity. Explores the roles of different actors within education policy, including legislators, courts, and non-governmental organizations. Provides students with frameworks for analyzing education policy, which students will then apply to analyze a current policy debate that is of interest to them.

ED 651. RESEARCH BILINGUALISM AND MULTILINGUALISM. (3 Credits)
Develops critical research skills to create new knowledge in the field of multilingualism. Examines interdisciplinary and intersectional perspectives to consider notions of identity among multilinguals and explores the historical trajectory of bilingualism and multilingualism research. Provides a broad understanding of the theoretical and methodological frameworks used to study bilingualism and multilingualism in globalized contexts.

ED 652. ETHNOGRAPHIC METHODS. (3 Credits)
As an advanced qualitative method class, this course introduces theory and ethnographic research methods by presenting the various ways by which socio-cultural anthropologists observe and analyze phenomena, groups or individuals in everyday language and social practices in their local and global contexts, taking into account issues of language, equity and educational policy. Students will carry out an ethnographic research project of a particular phenomenon they wish to learn more about.
Prerequisites: SED 622 with B or better

ED 653. DISCOURSE, IDENTITY AND EDUCATION. (3 Credits)
Builds a foundation in discourse theory and its applications to identity and education. Includes empirical studies that draw from particular lenses of discourse theory, exemplifying how these scholars organize the design, implementation, and discussion of research around discourse theory. Develops knowledge of discourse theory to propose a study that could be conducted drawing from discourse analytic perspectives.

ED 808. WORKSHOP. (1-4 Credits)
This course is repeatable for 16 credits.

Science and Mathematics Education

SED 401. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

SED 405. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

SED 406. PROJECTS. (1-16 Credits)
This course is repeatable for 16 credits.

SED 407. SEMINAR. (1-16 Credits)
This course is repeatable for 16 credits.

SED 409. FIELD PRACTICUM: SCIENCE AND MATHEMATICS. (3 Credits)
Placement in middle or high school (grades 7-12) to assist in developing competencies with adolescents in science/mathematics classes.
This course is repeatable for 18 credits.

SED 412. TECHNOLOGY FOUNDATIONS FOR TEACHING MATH AND SCIENCE. (3 Credits)
Integration of instructional technologies with other strategies to teach math and science in elementary, middle, and secondary schools in the 21st century.

SED 413. INQUIRY IN SCIENCE AND SCIENCE EDUCATION. (3 Credits)
Investigation of inquiry and the nature of inquiry in science as it relates to science education. Students will examine issues relating to integrating scientific understandings and practice into K-12 instruction.

SED 414. INQUIRY IN MATHEMATICS AND MATHEMATICS EDUCATION. (3 Credits)
Investigation of mathematics as it relates to mathematics education. Students will examine issues related to integrating mathematical understanding, mathematics standards/curricula, and mathematics-specific strategies in K-12 instruction. Lec/lab.

SED 416. INQUIRY IN SCIENCE AND MATHEMATICS EDUCATION. (3 Credits)
Investigation of inquiry and the nature of inquiry in mathematics and science as it relates to education. Students will examine issue relating to integrating mathematical and scientific understandings and practices into K-12 education.

SED 419. TEACHING MATHEMATICAL MODELING IN STEM. (3 Credits)
Provides students an overview of the content requirements in the Common Core Standards for Mathematics and the teaching practices that are central to those standards with a focus on the role of mathematical modeling. Students experience content lessons and lessons focused on supporting students in developing understanding of that content.
Recommended: Background in an educational setting or as a pre-service teacher at any level, a K-12 teacher or free-choice learning educator

SED 431. OVERVIEW OF FREE-CHOICE LEARNING. (3 Credits)
Examines learning that occurs when people believe they have choices over what and how they learn, how much time they spend learning, and what their sources of information are. Covers current research on learning in museums, aquariums, zoos, botanical gardens, science centers, after-school programs, media and apprenticeships.

SED 435. COMMUNICATING OCEAN SCIENCES TO INFORMAL AUDIENCES. (3 Credits)
For students interested in improving their ability to communicate their scientific knowledge by helping general public and student audiences learn about ocean sciences in a wide variety of learning settings. Combines instruction in inquiry-based teaching methods and learning theory with work in student’s local informal learning settings like museums, zoos, aquariums and libraries.

SED 459. SCIENCE AND THE NATURE OF INQUIRY. (3 Credits)
Focuses on inquiry approaches to the teaching and learning of science. Development of teaching strategies including materials and resources for teaching science using an inquiry approach as well as more teacher-directed approaches.

SED 473. SCIENCE PEDAGOGY AND TECHNOLOGY I. (4 Credits)
Development of pedagogical content knowledge in grades 6-12 science instruction: learning theory, nature of science, technology integration, and reform recommendations. Lec/lab/rec.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 474</td>
<td>MATHEMATICS PEDAGOGY AND TECHNOLOGY I.</td>
<td>(4 Credits)</td>
<td>Development of pedagogical content knowledge in grades 6-12 mathematics instruction: learning theory, nature of mathematics, technology integration, and reform recommendations. Recommended: Investigation of mathematics as it relates to mathematics education and SED 414</td>
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<tr>
<td>SED 476</td>
<td>MATHEMATICS PEDAGOGY AND TECHNOLOGY II.</td>
<td>(4 Credits)</td>
<td>Development of additional pedagogical content knowledge in grades 6-12; stress on dominant themes of the school mathematics curriculum including problem solving, reasoning, communication, and connections as well as the integration of technology into the mathematics classroom. Prerequisites: SED 474 with D- or better</td>
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<td>SED 477</td>
<td>SCIENCE PEDAGOGY AND TECHNOLOGY II.</td>
<td>(4 Credits)</td>
<td>Development of pedagogical content knowledge in grades 6-12; science instruction; learning theory, nature of science, technology integration, and reform recommendations. Prerequisites: SED 473 with C or better</td>
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<td>SED 499</td>
<td>SPECIAL TOPICS.</td>
<td>(3 Credits)</td>
<td>PREREQ: Provisional acceptance to Education Double Degree program. This course is repeatable for 18 credits.</td>
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<td>SED 501</td>
<td>RESEARCH.</td>
<td>(1-16 Credits)</td>
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<td>SED 509</td>
<td>PRACTICUM.</td>
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<td>SED 510</td>
<td>PROFESSIONAL INTERNSHIP: SCIENCE OR MATHEMATICS EDUCATION.</td>
<td>(1-16 Credits)</td>
<td>Supervised teaching experience at the elementary, middle or high school level; students experience general classroom and professional responsibilities common to the regular science or mathematics teacher. This course is repeatable for 16 credits.</td>
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<td>SED 511</td>
<td>ANALYSIS OF CLASSROOMS I.</td>
<td>(3 Credits)</td>
<td>Observation and analysis of the complex science/ mathematics classroom (grades 3-12) and school culture and their impact on student learning.</td>
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<td>SED 512</td>
<td>TECHNOLOGY FOUNDATIONS FOR TEACHING MATH AND SCIENCE.</td>
<td>(3 Credits)</td>
<td>Integration of instructional technologies with other strategies to teach math and science in elementary, middle, and secondary schools in the 21st century.</td>
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<td>INQUIRY IN MATHEMATICS AND MATHEMATICS EDUCATION.</td>
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<td>Investigation of mathematics as it relates to mathematics education. Students will examine issues related to integrating mathematical understanding, mathematics standards/curricula, and mathematics-specific strategies in K-12 instruction. Lec/lab.</td>
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<td>SED 516</td>
<td>INQUIRY IN SCIENCE AND MATHEMATICS EDUCATION.</td>
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<td>Investigation of inquiry and the nature of inquiry in mathematics and science as it relates to education. Students will examine issue relating to integrating mathematical and scientific understandings and practices into K-12 education.</td>
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<td>TEACHING MATHEMATICAL MODELING IN STEM.</td>
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<td>Provides students an overview of the content requirements in the Common Core Standards for Mathematics and the teaching practices that are central to those standards with a focus on the role of mathematical modeling. Students experience content lessons and lessons focused on supporting students in developing understanding of that content. Recommended: Background in an educational setting or as a pre-service teacher at any level, a K-12 teacher or free-choice learning educator</td>
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<td>SED 520</td>
<td>TECHNOLOGY FOR MATH AND SCIENCE EDUCATION.</td>
<td>(3 Credits)</td>
<td>Explore current and emerging technologies applied to math and science learning that promote critical thinking, communication, collaboration, and creativity. Gain technology skills and resources that can be transferred to formal and informal learning environments. Recommended: Basic computer literacy.</td>
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<td>SED 531</td>
<td>OVERVIEW OF FREE-CHOICE LEARNING.</td>
<td>(3 Credits)</td>
<td>Examines learning that occurs when people believe they have choices over what and how they learn, how much time they spend learning, and what their sources of information are. Covers current research on learning in museums, aquariums, zoos, botanical gardens, science centers, after-school programs, media and apprenticeships.</td>
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<td>SED 535</td>
<td>COMMUNICATING OCEAN SCIENCES TO INFORMAL AUDIENCES.</td>
<td>(3 Credits)</td>
<td>For students interested in improving their ability to communicate their scientific knowledge by helping general public and student audiences learn about ocean sciences in a wide variety of learning settings. Combines instruction in inquiry-based teaching methods and learning theory with work in student’s local informal learning settings like museums, zoos, aquariums and libraries.</td>
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<td>SED 541</td>
<td>WEATHER CONCEPTS FOR SCIENCE AND MATH TEACHING.</td>
<td>(3 Credits)</td>
<td>Science content and pedagogy in learning and teaching basic weather concepts. Recommended: Background in an educational setting or as a K-12 teacher or free-choice learning educator</td>
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<tr>
<td>SED 550</td>
<td>HIGH QUALITY SCIENCE AND MATHEMATICS INSTRUCTION.</td>
<td>(3 Credits)</td>
<td>Explores high quality science and mathematics instruction to prepare professional teachers in science and mathematics. Develops skills in high-leverage instructional practices and reviews research literature that supports these practices. Investigates social justice issues related to systems of schooling in the United States.</td>
</tr>
</tbody>
</table>
SED 552. MATHEMATICS METHODs: PRACTICUM I. (3 Credits)
Theoretical background, practical knowledge, and skills for teaching in mathematics classrooms (grades 3-12). Instructional methods/ modes, classroom management, contemporary curriculum goals and instructional planning.

SED 553. SCIENCE METHODS/PRACTICUM I. (3 Credits)
Theoretical background, practical knowledge, and skills for teaching in science classrooms (grades 3-12). Instructional methods/modes, classroom management, contemporary curriculum goals and instructional planning.

SED 564. ENGINEERING AND SCIENCE IN THE LIVES OF STUDENTS. (3 Credits)
Explore the use of construction engineering as a vehicle to make science and math more relevant and useful for the everyday life of students.
Recommended: Background in an educational setting or as a K-12 teacher or free-choice learning educator (eg. museum, science camp)

SED 566. FOSTERING REFLECTIVE DISCUSSION IN SCIENCE AND MATH CONTEXTS. (3 Credits)
Examines ways of speaking that foster learning in science and mathematics contexts such as K-16 classrooms and free-choice learning settings (i.e., museums, zoos, science camps, etc.). Assignments assume the participant is a K-12 teacher or free-choice learning educator enrolled in a graduate licensure program or has access to an educational setting.

SED 573. SCIENCE PEDAGOGY AND TECHNOLOGY I. (4 Credits)
Development of pedagogical content knowledge in grades 6-12 science instruction: learning theory, nature of science, technology integration, and reform recommendations. Lec/lab/rec.

SED 574. MATHEMATICS PEDAGOGY AND TECHNOLOGY I. (4 Credits)
Development of pedagogical content knowledge in grades 6-12 mathematics instruction: learning theory, nature of mathematics, technology integration, and reform recommendations.
Recommended: Investigation of mathematics as it relates to mathematics education and SED 414

SED 576. MATHEMATICS PEDAGOGY AND TECHNOLOGY II. (4 Credits)
Development of additional pedagogical content knowledge in grades 6-12; stress on dominant themes of the school mathematics curriculum including problem solving, reasoning, communication, and connections as well as the integration of technology into the mathematics classroom.
Prerequisites: SED 574 with C or better

SED 577. SCIENCE PEDAGOGY AND TECHNOLOGY II. (4 Credits)
Development of pedagogical content knowledge in grades 6-12; science instruction; learning theory, nature of science, technology integration, and reform recommendations.
Prerequisites: SED 573 with C or better

SED 580. RESEARCH AND EVALUATION. (3 Credits)
Analysis of qualitative and quantitative empirical research in science education, mathematics education and education in general. Development of data collection instruments for use by researchers and teachers of science education, mathematics education and education in general, including portfolio and other forms of alternative assessment.

SED 581. PROFESSIONAL DEVELOPMENT AND PRACTICUM IN MATHEMATICS. (3 Credits)
Developing and implementing a program for continuing learning and evaluation in mathematics education.

SED 582. PERSONAL DIMENSIONS OF FREE-CHOICE LEARNING. (3 Credits)
Investigates the fundamental roles that identity, motivation, interest, prior knowledge and experience, and choice and control play in supporting learning and how learning leaders can build on these dimensions of learning in order to successfully engage lifelong learners.

SED 583. SOCIO-CULTURAL DIMENSIONS OF FREE-CHOICE LEARNING. (3 Credits)
Investigates connections between theories of free-choice learning and the fundamental concepts of sociology, social psychology and anthropology: social stratification, social structure and interaction, social institutions, and cultural background. Real world examples will be included to support learning leaders' efforts to facilitate the socio-cultural dimensions of lifelong science and mathematics learning.

SED 584. PHYSICAL DIMENSIONS OF FREE-CHOICE LEARNING. (3 Credits)
Learning is influenced by the interaction of variables within three contexts--personal, socio-cultural and physical. This course focuses on how macro-scale environmental factors (e.g. space, crowding, novelty) and micro-scale environmental factors (e.g. design elements, real objects, different media) support free-choice learning.

SED 592. PROFESSIONAL DEVELOPMENT AND PRACTICUM IN SCIENCE. (3 Credits)
Developing and implementing a program for continuing learning and evaluation in science education.

SED 594. ADVANCED INSTRUCTIONAL STRATEGIES IN SCIENCE AND MATHEMATICS. (3 Credits)
Explore instructional strategies and skills for K-12 science and math teachers to support student learning rigorous content.

SED 595. ASSESSMENT AND EVALUATION. (3 Credits)
Examines education assessment focusing on formative assessment in multiple contexts across learning environments.

SED 597. PROFESSIONAL DEVELOPMENT IN MATHEMATICS AND SCIENCE EDUCATION. (3 Credits)
Development of strategies and skills for developing, implementing and evaluating a program of professional development for mathematics or science educators considering various choices of program settings.

SED 598. MATHEMATICS AND SCIENCE CURRICULUM. (3 Credits)
Current trends, history of these trends, and rationale for mathematics and science curriculum reform across learning environments.

SED 599. TOPICS IN SCIENCE EDUCATION. (3 Credits)
Current issues, trends, and topics in science education. May be repeated for credit with different topics.
This course is repeatable for 18 credits.

SED 601. RESEARCH. (1-16 Credits)
This course is repeatable for 16 credits.

SED 603. DISSERTATION. (1-16 Credits)
This course is repeatable for 999 credits.

SED 605. READING AND CONFERENCE. (1-16 Credits)
This course is repeatable for 16 credits.

SED 606. PROJECTS. (1-16 Credits)
This course is repeatable for 16 credits.

SED 607. SEMINAR. (1-16 Credits)
This course is repeatable for 16 credits.

SED 608. WORKSHOP. (1-16 Credits)
This course is repeatable for 16 credits.
SED 611. SURVEY OF RESEARCH ON TEACHING. (3 Credits)
Critical analysis of perspectives of research in science/math education with a focus on teaching as the unit of analysis.
Prerequisites: SED 580 with C or better

SED 612. QUANTITATIVE RESEARCH DESIGN AND CRITICAL ANALYSIS. (3 Credits)
A study of quantitative research designs and analytical procedures with specific applications in science or mathematics education.
Prerequisites: SED 580 (may be taken concurrently) with C or better

SED 613. LEARNING THEORY. (3 Credits)
Provides a critical overview and analysis of current theories of learning and development, beginning with a discussion about what learning is, how it has been viewed and studied over time, and how seminal theories inform an understanding of lifelong learning and its facilitation.
Prerequisites: SED 580 (may be taken concurrently) with C or better

SED 615. PRACTICUM IN MATHEMATICS/SCIENCE IN COLLEGE TEACHING. (3 Credits)
Supervised field practicum in college mathematics/science teaching. This course is repeatable for 9 credits.

SED 621. SURVEY OF RESEARCH ON LEARN. (3 Credits)
Critical analysis of perspectives on student thinking and learning in science/math education.
Prerequisites: SED 580 (may be taken concurrently) with C or better

SED 622. QUALITATIVE RESEARCH TECHNIQUES. (3 Credits)
A study of qualitative research designs and analytical procedures with specific applications in science and mathematics education.
Prerequisites: SED 580 (may be taken concurrently) with C or better

SED 623. CURRICULUM THEORY. (3 Credits)
Establishes theoretical grounding of curriculum. Includes theoretical background, practical knowledge, and skills related to science and mathematics curriculum, including the history, curriculum theory and practice.
Prerequisites: SED 580 (may be taken concurrently) with C or better

SED 699. SPECIAL TOPICS. (1-16 Credits)
This course is repeatable for 16 credits.

SED 808. WORKSHOP. (1-16 Credits)
This course is repeatable for 99 credits.