Department of Curriculum and Instruction/Literacy Studies

Degrees Offered

• Master of Arts (without or with certification)
• Doctor of Education
• Doctor of Philosophy

The Department of Curriculum and Instruction/Literacy Studies is comprised of several areas including Curriculum and Instruction, Literacy Studies, Social and Cultural Foundations, Educational Leadership Studies and Higher Education. Degree programs prepare future educators and administrators who aspire to research, develop, and implement effective leadership and innovative curricular and instructional practices for individuals ages pre-K to adult. Our programs provide opportunities for students to earn initial teacher licensure and pursue advanced degrees at the Masters and Doctoral levels. The primary focus of the Master of Arts and Doctor of Education programs in the department is to help students develop deeper knowledge, more diverse skills, an inquiry-oriented approach, and professional competencies related to the various areas in the department. Faculty in the department are recognized leaders in research, teaching, and service who are committed to providing a rigorous and engaging educational experience.

For more information, please visit our website at http://cils.wvu.edu/.

FACULTY

CHAIR
• Samuel F. Stack, Jr - Ph.D. (University of South Carolina)
  Social Foundations of Education

PROFESSORS
• Helen Hazi - Ph.D. (University of Pittsburgh)
  Educational Leadership Studies, Public Education Administration
• Dale S. Niederhauser - Ph.D. (University of Utah)
  Foundations of Education, Educational Technology, Elementary Education: Early Childhood
• James Rye - Ph.D. (Pennsylvania State University)
  Science Concept Learning; Science/Technology/Society Education, Human Nutrition and Health Education

ASSOCIATE PROFESSORS
• Johnna J. Bolyard - Ph.D. (George Mason University)
  Mathematics Education, Mathematics Teacher Development, Use of Representation in Mathematics Teaching
• Jeffrey Carver - Ed.D. (Illinois State University)
  Science Education, Organic Chemistry, Physics
• Sharon Hayes - Ph.D. (University of Florida)
  Elementary Education, Action Research, Professional Development & Literacy
• Charline J. Barnes Rowland - Ed.D. (Virginia Polytechnic Institute and State University)
  Literacy Education, Teacher Education
• Aimee L. Morewood - Ph.D. (University of Pittsburgh)
  Reading Education, Professional Development, Effective Teaching Strategies
• Allison Swan Dagen - Ph.D. (University of Pittsburgh)
  Instructional and Learning Reading
• Sarah Selmer - Ed.D. (West Virginia University)
  Mathematics Education
• Robert A. Waterson - Ph.D. (Purdue University)
  Social Studies History, Democracy and Citizenship Education, Multicultural Education

ASSISTANT PROFESSORS
• Malaya Bernstein - Ph.D. (Northwestern University)
  English Education
• Matthew P. Campbell - Ph.D. (Oregon State University)
  Mathematics Education
• Rodney Hughes - Ph.D. (Penn State University)
  Higher Education and Economics
• Denise Lindstrom - Ph.D. (Iowa State University)
  Technology and Teacher Education, New Literacies Studies, Digital Media
• Melissa Luna - Ph.D. (Northwestern University)
  Learning Sciences, Environmental Education, Science Education, Elementary Education
• Melissa Sherfinski - Ph.D. (University of Wisconsin, Madison)
  Curriculum Theory and Research, Research Methodology
• Audra Slocum - Ph.D. (Ohio State University)
  Appalachian Education, Multicultural Teacher Education, Adolescent Literacies
• Erin McHenry Sorber - Ph.D. (Pennsylvania State University)
  Educational Policy Studies, Administrative, Planning, and Social Policy
• Nathan Sorber - Ph.D. (Pennsylvania State University)
  Higher Education
• Keri D. Valentine - Ph.D. (The University of Georgia, Athens)
  STEM Education (Mathematics), Learning, Design, & Technology, Science Education

TEACHING ASSISTANT PROFESSORS
• Beth B. Satterfield - M.S. (West Virginia University)
  Early Childhood Education, Child Development
• Heiko Everwien ter Haseborg - Ph.D. (West Virginia University)
  Curriculum, Literacy, & Cultural Studies, Secondary Education, Foreign Languages

CLINICAL ASSOCIATE PROFESSOR
• Stephanie Morris Lorenze - Ed.D. (West Virginia University)
  Secondary Education

CLINICAL ASSOCIATE INSTRUCTOR
• Sylvia Berryhill - M.A. (Penn State University)
  Principal Certification, Reading Specialist

PROFESSORS EMERITI
• John L. Carline - Ph.D. (Syracuse University)
  Emeritus
• Boyd D. Holtan - Ed.D (University of Illinois)
  Emeritus
• Ronald V. Iannone - Ed.D. (Syracuse University)
  Emeritus
• C. Kenneth Murray - Ph.D. (Ohio State University)
  Emeritus
• Patricia K. Smith - Ed.D. (West Virginia University)
  Emerita

ASSOCIATE PROFESSORS EMERITI
• Ardeth M. Deay - Ph.D. (Cornell University)
  Emerita
• Perry D. Phillips - Ed.D. (West Virginia University)
  Emeritus

ASSISTANT PROFESSORS EMERITI
• Michael A. Caruso - M.A. (West Virginia University)
  Emeritus
• Jane S. Cardi - Ed.D. (West Virginia University)
  Emerita
• Barbara Mertins - M.S.L.S. (Syracuse University)
  Emerita
**PROGRAM ADMISSION REQUIREMENTS**

**Master of Arts Admission**

All applicants for the Elementary & Secondary Education Master of Arts program must:

- Submit WVU Graduate application for admission, found at https://admissions.wvu.edu/how-to-apply. (be sure to upload all required information)
- Hold a Bachelor’s degree with a 2.75 GPA or above
- Submit a one-page goal statement. The Statement should be of professional experiences, career ambitions and will be considered a writing sample
- Test requirements: Praxis Core Academic Skills for Educators. Student can take the combined test # 5751 this will include the 3 section (reading #5712, writing # 5722 & math #5732).
  - The Praxis CORE may be waived with an enhanced ACT score of 26 or higher, a re-centered SAT score of 1125 (April 1995), or a revised SAT of 1170 (March 2005) or higher OR a 26 ACT or Math and Critical Reading SAT total of 1170 (pre-March 2016 test sitting) or an Evidence Based Reading/Writing and Math Section 1240 (post-March 2016 test sitting). (OR) Graduate Records Examination (GRE), no older than five years. Please contact department for minimum score requirements.
- TOEFL (international students) - TOEFL score must be at least 550 (paper) or 213 (computer) 79-80 iBT or IELTS 6.5.

**Elementary Education/Advance**

All applicants for the Elementary Education/Advance online (major code 4568) program must:

- Submit WVU Graduate application for admission. The application can be found at https://admissions.wvu.edu/how-to-apply.
- Hold a Bachelor’s degree with a 2.75 GPA or above
- Attach a copy of your Teaching Certification.
- Submit a one-page goal statement. The Statement should be of professional experiences, career ambitions and will be considered a writing sample.

**Master in Literacy Studies**

All applicants for the Master in Literacy Studies (major code 4539) must:

- Submit WVU Graduate application for admission. The application can be found at https://admissions.wvu.edu/how-to-apply
- Hold a Bachelor’s degree with a 2.75 GPA or above
- A valid state teaching license (Attached to application)

**Doctoral Admission, Ph.D.**

All applicants Interdisciplinary Ph.D. in Education, (major code 4545) must:

- Submit the WVU Graduate application for admission, dated and received by the department by December 2. The application is found at http://graduateadmissions.wvu.edu/how-to-apply. Required information to be uploaded with the application is as follows:
  - Scholarly writing samples that will be evaluated by teams of faculty members. A new writing sample may be requested if the student applies more than once.
  - Three letters of recommendation, addressed to Interdisciplinary Ph.D. in Education Review Committee.
  - A statement of purpose, discussing research goals and how they can be met through the Interdisciplinary Ph.D. program. We expect students to be familiar with the faculty in CEHS and how the faculty might help them achieve their research goals. Applicants must indicate their intended focus area (area of emphasis) for their Ph.D. program. Please review and add one of the following to the statement of purpose.
    - HO88 – Educational Leadership & Policy Studies
    - HO89 – Learning, Instructional Design & Technology
    - HO90 – Curriculum, Literacy & Culture Studies
    - HO95 – Human Development & Family Studies
  - Achieved 3.0 GPA or above in their undergraduate degree and 3.5 or above GPA in their graduate degree.
  - Completed the Graduate Records Examination (GRE) or Millers Analogy Test (MAT) withing the last five years. Please contact the department for minimum score requirements.
  - Completed the TOEFL (international students). TOEFL scores must be at least 80 (internet version), 213 (computer-based), or 550 (paper-based) 79-80 iBT or IELTS 6.5.

Incomplete applications will not be reviewed.
A face-to-face, phone, or Internet interview may be required before students are formally admitted.

An Admissions Committee composed of faculty members will screen all applications.

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**Doctoral Admission, Ed.D.**

All applicants for the [Curriculum & Instruction Ed.D](#) (major code 4515) must:

- Comply with the requirements of West Virginia University, the College of Education and Human Services, and Curriculum and Instruction program
- Submit the WVU Graduate application for admission, found at [http://graduateadmissions.wvu.edu/how-to-apply](http://graduateadmissions.wvu.edu/how-to-apply). The required information to be uploaded to the application is:
  - Scholarly writing samples - writing samples will be evaluated by teams of faculty members.
  - Three letters of recommendation, addressed to the Curriculum & Instruction Ed.D. Review Committee. The letters explicitly address the candidate's potential as a doctoral student.
  - Writing sample. The writing sample provides clear evidence of the student's academic writing ability.
  - Personal Vita
  - Goal statement, a clear statement of professional goals, well written, and clearly indicates how the applicant's goals fit with the program.
- Earned an undergraduate degree GPA of 3.0 or higher
- Earned a graduate degree GPA of 3.25 or higher
- Completed the Graduate Records Examination (GRE) or Millers Analogy Test (MAT) within the last five years. Please contact department for minimum score requirements.
- Completed the TOEFL if applying as an international students. The TOEFL score must be at least 79 (internet version), 213 (computer-based), or 550 (paper-based) 79-80 iBT or IELTS 6.5.

A face-to-face, phone, or Internet interview may be included in the application process before students are formally admitted.

An Admissions Committee composed of faculty members will screen all application.

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**Program Policies and Matriculation Benchmarks — Teaching Certification Programs**

All students enrolled in Master and Certification (MAC) programs in the Department of Curriculum and Instruction/Literacy Studies must adhere to the following policies. Please consult with your adviser to discuss your program plan.

**CRITERIA FOR ADMISSION TO THE M.A. PROGRAMS IN ELEMENTARY/SECONDARY EDUCATION:**

- Bachelor’s degree
- GPA 2.75
- One page goal statement, describing the reason you wish to complete this program.
- Testing requirements: Passing scores on the combined Praxis Core Academic Skills for Educators: #5751 OR GRE. The tests may be waived if the student has completed another masters degree or had 26 on the ACT or 1170 on the SAT.
- TOEFL, required of International students, with the following scores: TOEFL 550 paper or 213 computer. (79-80 iBT)

**MATRICULATION CRITERIA:**

- Contact the Office of Student Success [http://cehs.wvu.edu/advising](http://cehs.wvu.edu/advising), for a transcript analysis for content area requirements.
- A 3.0 GPA in graduate coursework, with a "C" or above in all graduate level courses are required for graduation
- C&I 602 and EDP 600 are prerequisite courses for content methods coursework.
- C&I 602 must be taken in the first or second semester after admission into the program, and completed with a "B" or better
- Provide the results of an "Online Criminal Background and Fingerprinting Check to school placement personnel. Please see the Office of Student Success [http://cehs.wvu.edu/advising](http://cehs.wvu.edu/advising) for more information.
- Application for transient credit for graduate courses taken at other institutions must be approved by the adviser and the associate dean for academic affairs, or designee
- Elective courses must be approved by the adviser prior to enrollment.
- All students must complete 125 hours of approved fieldwork (embedded in the program)
- All students must successfully complete a professional portfolio that demonstrates mastery of WV Professional Teaching standards and specialization content. Students submit the portfolio in C&I 680.
CRITERIA FOR ENTERING STUDENT TEACHING PLACEMENT:

- Completion of all professional education and subject content coursework is required before a student may enter a student teaching placement
- Completion and submission of Student Teaching Application 1 year before your Student teaching semester
- Hold a State Student teaching Permit
- Successful completion of the PRAXIS II in the content area in which you are student teaching. Test scores must be submitted to the Office of Student Success one full semester before the student teaching semester.
- Approval by the Certification Officer that all requirements have been met.

CERTIFICATION

Students seeking licenses to teach in the State of West Virginia must be recommended by the Certification Officer, Michael Sekula. Recommendations are provided after all the following criteria have been completed:

1. Program completion and Registrar's verification of graduation
2. All students must submit passing scores for the appropriate Praxis PLT to the Office of Student Success prior to recommendation for certification.
3. Submission of all appropriate forms to the Certification Officer. As state certification requirements change, additional coursework may be required.

Note: State requirements for certification may change. Students are responsible for complying with all state requirements for certification at the time of their request for certification.

Master of Arts Elementary Education with Initial Teaching Certification

This program is available to those students who hold a bachelor's degree in non-education fields or other education fields and choose to pursue a degree and certification in teacher education. This program is also designed for career changers, individuals who choose to change careers after several years on the job. Visit our web site http://cils.wvu.edu/mac

This program requires 36 hours of education core classes, 12 hours of clinical experience, and 45 hours of content areas courses. Students must consult with the Program Coordinator for a transcript analysis to determine the exact content requirements required.

Denise Lindstrom
denise.lindstrom@mail.wvu.edu
Allen Hall, 606B

Secondary Education Master's Degree Programs with Teaching Certification

The purpose of the secondary education program is to provide rigorous experiences that prepare individuals to be highly qualified and effective teachers. Students pursuing a master of arts in secondary education with initial certification may choose one of eight content specialization areas (English, German, French, Spanish, math, science, or social studies). Teacher certification requirements are based on the West Virginia Department of Education’s Policy 5100, Approval of Educational Personnel Preparation Programs and Policy 5202, Licensure of Professional/Paraprofessional Personnel. This program requires 36 hours of education core classes, 12 hours of clinical experience, and 37-56 hours, (depending on the area) in content areas courses. Visit our web site http://cils.wvu.edu/mac. Students must consult with the Program Coordinator for a transcript analysis to determine the exact content requirements required.

Denise Lindstrom
denise.lindstrom@mail.wvu.edu
Allen Hall, 606B

Online Masters (M.A.) in Higher Education Administration

The master's program is designed to enhance leadership skills and prepare students for administration positions within college and university settings.

FEATURES

- Online graduate program with options for face-to-face courses. Visit our web site http://cils.wvu.edu/hied/masters
- Part-time or full-time enrollment options
- Courses can be taken from any geographic location
- Flexible program of study (two to eight years to complete the program)
- Advanced learning platform technologies (synchronous and asynchronous)
- Courses taught by full-time faculty and administrators
CAREER PLACEMENT

- Alumni have been placed in executive, administrative (business administration, academic affairs, and student affairs), and faculty support positions.
- Higher education administrators held about 161,800 jobs in 2012 and employment in this area is projected to grow 15% from 2012 to 2022, faster than the average for all occupations.
- Higher education administrators work at colleges, universities, community colleges, and technical schools.

MASTER OF ARTS IN HIGHER EDUCATION CURRICULUM AND TEACHING PROGRAM

Designed for individuals who wish a master of arts degree in education focusing on teaching in higher education. This program provides flexibility, knowledge, and skills in education especially useful for international students and other students who do not wish to teach in an American public school setting. Program Coordinator Denise Lindstrom
denise.lindstrom@mail.wvu.edu

Online Advanced Master of Arts in Elementary Education Program

Designed for individuals who hold a teaching license. This program provides increased knowledge, skills, and competence for teachers working with students in elementary school settings. The program consists of 30 credit hours and is offered online through the Electronic Campus of the Southern Regional Education Board (SREC). All students pay in-state tuition rates for courses offered through the Electronic Campus regardless of residency. Visit our web site http://cils.wvu.edu/advanced-ma

Masters of Arts in Literacy Education

Designed for individuals who hold a teaching license. This 30-credit hour Master program, is nationally accredited through the Council for the Accreditation of Educator Preparation (CAEP) and International Literacy Association (ILA). This graduate program prepares candidates to be certified as Reading Specialists (Pre-K-Adult) and to fulfill the roles of specialized reading professionals currently outlined by the International Literacy Association (ILA). These roles include: Interventionist, Literacy Coach and School/Literacy Leader. Students should contact the Literacy Education Program Coordinator, Allison Swan Dagen (Allison.Swan@mail.wvu.edu). Visit our web site  http://cils.wvu.edu/literacy-ed

DOCTORAL PROGRAMS

THE DOCTOR OF PHILOSOPHY WITH A MAJOR IN EDUCATION

The Doctor of Philosophy degree program provides a rigorous course of study along with mentored research and teaching experiences to enable students to achieve core educational objectives as scholars in four specialization areas: Educational Leadership and Policy; Learning, Instructional Design and Technology; Curriculum, Literacy and Cultural Studies; Human Development and Family Studies. Several thematic contexts, critical to our state and region, provide the platform for the study of education and achieving the competencies in each specialization area. These unique themes include: the rural nature of our state context, the poverty many children and families live in throughout the region, and the cultural context of Appalachia, all as they impact education. The research interests of faculty members participating in the program address aspects of these themes. Research and scholarly experiences prepare graduates who plan to pursue a research agenda in higher education or in educational research/policy centers. Visit our web site http://cehs.wvu.edu/grad/doc/phd-education

DOCTOR OF HIGHER EDUCATION ADMINISTRATION

FEATURES:
1. Hybrid graduate program with options for online and face-to-face courses. Visit our web site http://cils.wvu.edu/hied/doc
2. Part-time or full-time enrollment options
3. Flexible program of study
4. Synchronous online courses
5. Courses taught by full-time faculty and professors

CAREER PLACEMENT:

- Executive, administrative (business administration, academic affairs, and student affairs) and faculty support placements.
- Higher education administrators held about 161,800 jobs in 2012 and employment in this area is projected to grow 15% from 2012 to 2022, faster than the average for all occupations.
Faculty Positions
Policy Positions

Higher education administrators work at colleges, universities, community colleges, and technical schools.

THE DOCTOR OF EDUCATION WITH A MAJOR IN CURRICULUM & INSTRUCTION

The Curriculum and Instruction Doctorate in Education Program provides a personal approach to graduate studies. This program creates individually-planned programs of study to meet the unique experiences and professional goals of each student. Designed to meet the needs of working professionals, the program’s courses are offered in the evenings. The program provides flexibility to support career goals regarding educational research, curriculum design and evaluation, instructional support, and/or leadership in K-12 schools, universities, and other educational organizations. The program addresses three broad areas:

- A major emphasis in one of the following areas: curriculum studies, social theory, teaching and learning, diversity, and technology.
- A specialization or minor in one of the following areas: content (e.g. English education, STEM education, etc.) or integrated area (i.e., diversity, technology, evaluation, research, foundations, etc.)
- Research and educational foundations core: emphasizes the centrality of research commitment and competence—the ability and eagerness to conduct research as well as the ability to read, interpret and engage in professional discourse about research.

Graduate Certificate in Principal Certification

The Department of Curriculum and Instruction/Literacy Studies offers a graduate program for those who hold an earned Master’s Degree plus three years of teaching experience. The Principal Certification may be obtained by students holding master’s degrees in other areas in education, such as in reading, or elementary or secondary education, without completion of a second master’s degree in educational leadership. However, students not wishing to obtain a second master’s degree must complete all courses required for principal certification as defined below:

COURSE REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDLS 602</td>
<td>Human Resources Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EDLS 603</td>
<td>Principles of Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EDLS 610</td>
<td>School Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>EDLS 611</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EDLS 612</td>
<td>School: Policies, Politics and Laws</td>
<td>3</td>
</tr>
<tr>
<td>EDLS 785</td>
<td>Education Administration Internship</td>
<td>3</td>
</tr>
<tr>
<td>EDLS 693I</td>
<td>Special Topics (Technology and Leadership)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

OTHER REQUIREMENTS:

All candidates completing the Principal Preparation Program are required to pass the PRAXIS II (0410) Educational Leadership Administration and Supervision Test and complete the Teacher Evaluation training seminar provided by the West Virginia Center for Professional Development.

COURSES

C&I 501. Essential Topics for Teaching. 3 Hours.
This course provides an initial exposure for undergraduate and graduate students to themes in education to foster appreciation of the classroom experience by empowering teachers to be classroom leaders.

C&I 524. Middle School Number/Algebra Teaching 1. 1 Hour.
PR or CONC: MATH 524. Issues involved with sets of numbers as examples of algebraic systems, properties of groups, rings and fields. Properties of polynomials and polynomial rings. Mathematical modeling with finite differences and least squares. Applications in model curricula.

C&I 525. Middle School Number/Algebra Teaching 2. 1 Hour.
PR or CONC: MATH 525. Continuation of C&I 524. Issues involved with sets of numbers as examples of algebraic systems, properties of groups, rings, and fields. Properties of polynomials and polynomial rings. Mathematical modeling with finite differences and least squares.

C&I 528. Middle School Function/Change Teaching 1. 1 Hour.
PR or CONC: MATH 528. Teaching and Learning function concept operations on functions, limits, continuity, Intermediate Value Theorem, families of curves, optimization and area. Classroom applications, current research in learning. Applications in model curricula.

C&I 529. Middle School Functions/Change Teaching 2. 1 Hour.
C&I 530. Mathematics in the Elementary School. 3 Hours.
PR: Consent. Addresses current issues and trends in elementary mathematics education. Designed for the practicing elementary teacher.

C&I 533. Corrective Techniques in Mathematics Education. 3 Hours.
PR: Consent. Materials and methods used in diagnosis and remediation of learning difficulties in mathematics.

C&I 581. Independent Research in Curriculum Studies. 1-6 Hours.
Faculty-supervised study of topics not available through regular course offerings.

C&I 584. Student Teaching: Elementary-Early Childhood. 2-12 Hours.
PR: For elementary and early childhood undergraduates who meet eligibility requirements and other guidelines. (Applicable to preschool, nursery, day care, child care, kindergarten, primary grade, or elementary school.).

C&I 585. Student Teaching: Secondary Education. 2-12 Hours.
PR: Students enrolled in secondary education undergraduate programs who meet eligibility requirements and other guidelines.

C&I 587. Advanced Clinical Experience. 1-6 Hours.
PR: Consent. Clinical experience in teaching-learning situations at any level.

C&I 588. Professional Field Experience. 2 Hours.
Students are placed in classroom settings where they are required to observe classroom teachers and engage in instructional and non-instructional programming.

C&I 591A-L. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

C&I 592A-Z. Directed Study. 1-6 Hours.
Directed Study, reading, and or research.

C&I 593A-Z. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

C&I 594A-J. Seminar. 1-6 Hours.
C&I 594J. Seminar. 1-6Hr. Seminars arranged for advanced graduate students.

C&I 600. United States Education for International Students. 3 Hours.
PR: International students with graduate status and developing oral and written English skills. To assist international students in understanding the U.S. system of education. Included: dominant U.S. values related to education, structure of U.S. education at all levels, models and strategies, field trips, and international comparisons.

C&I 601. The Elementary-School Curriculum. 3 Hours.
PR: 20 hours of undergraduate credit in elementary education, or consent. Analysis of curriculum designs in elementary education with emphasis on methods and techniques of development.

C&I 602. Curriculum and Teaching Principles. 3 Hours.
This course will give the student a basic foundation in the principles, development, and design of curriculum and teaching models.

C&I 604. School Curriculum. 3 Hours.
PR: Teaching experience or consent. Emphasizes socioeconomic and cultural influences on curriculum; principles of curriculum development; curriculum building in various teaching fields; and techniques of experimentation and evaluation.

C&I 605. Twenty-First Century Teaching and Learning. 3 Hours.
Interdisciplinary content if a 3 credit hour course. This course examines new and emerging technologies as they relate to classroom integration and pedagogy.

C&I 606. Curriculum for Middle Childhood. 3 Hours.
Survey course which includes: historical, social, and cultural influences on the curriculum; the learner characteristics; curriculum and instructional organization and their relationship to facilities available; and evaluation and implementation of middle childhood curriculum.

C&I 608. Introduction to Alternative Learning Environments. 3 Hours.
This course will provide opportunities for educators to explore and analyze the trends and issues in alternative learning environments in public education.

C&I 609. Experiences in Alternative Learning Environments. 6 Hours.
PR: C&I 608 and SCFD 620 and consent. This course helps teachers to learn and practice skills that are needed to be an effective teacher in an alternative teaching environment. (Alternate years.).

C&I 612. Early Childhood Curriculum. 3 Hours.
PR: C&I 410 and C&I 411 or consent. Curriculum development for early childhood education Pre-K to 4th grade, including social, creative, cognitive, physical, and academic goals. Societal, historical, and theoretical influences on early childhood curriculum are examined.

C&I 614. Early Childhood Instruction. 3 Hours.
PR: C&I 410 and C&I 411 or consent. Design of instruction for continuous improvement toward mastery of curriculum goals for early childhood education Pre-K to 4th grade.
C&I 615. Issues in Holocaust Education. 3 Hours.
Course examines important issues related to the Holocaust, and their implications for inclusion in curriculum. It examines instructional procedures helpful to youth in trying to comprehend the Holocaust's meaning for living in the 21st century.

C&I 616. Early Childhood Program Development and Evaluation. 3 Hours.
PR: C&I 410 and C&I 411 or consent. Development, administration, and evaluation of facilities, programs, and support systems for early childhood education Pre-K to 4th grade. Includes a focus on family connections and support systems related to early childhood classrooms.

C&I 617. Language Arts in Early Childhood. 3 Hours.
Designing instruction for an integrated development of writing, reading, speaking and listening with an emphasis on literacy acquisition in early childhood education Pre-K to 4th grade.

C&I 618. Storytelling in Early Childhood. 3 Hours.
This course will assist students in telling, reading, and creating stories for children. Techniques, methods, and research effective in the art of storytelling will be examined and applied as they relate to total child development.

C&I 623. Contemporary Issues in English Education. 3 Hours.
PR: Graduate standing. Provides the student with a knowledge of several contemporary issues in English teaching which have immediate and long-range ramifications for secondary-school English instruction. (1 hr. lec., 2 hr. sem.).

C&I 624. Advanced Methods in English Education. 3 Hours.
PR: C&I 602 and EDP 600 and Graduate standing. (For classroom teachers of English.) Analysis of recent trends and innovations in methodology. Readings and discussions will lead to the development of instructional strategies and units for secondary English classrooms. (1 hr. lec., 1 hr. lab., 1 hr. sem.).

C&I 630. Problem Solving in Math. 3 Hours.
PR: C&I 602 and EDP 600. A capstone course designed to further develop student's conceptual understanding of mathematics.

C&I 631. Mathematics in the Elementary School. 3 Hours.
PR: Consent. Addresses current issues and trends in elementary mathematics education. Designed for the practicing elementary teacher.

C&I 632. Research in Math Curriculum and Technology. 3 Hours.
This graduate level course is designed to focus on research and trends associated with applications of technology and curriculum in mathematics settings. Class topics will span curriculum, technology, and assessment in math education.

C&I 633. Mathematics in the Junior High School and Middle School. 3 Hours.
A methods course designed to teach selected topics including lesson planning, developing appropriate teaching/learning methods, and evaluations from middle school mathematics.

C&I 634. Mathematics in the Secondary School. 3 Hours.
PR: C&I 602 and EDP 600 and Consent. Patterns of mathematics curriculum in the secondary school; practices in teaching mathematics; preparation, selection and use of instructional materials. Designed for the practicing secondary mathematics teacher.

C&I 635. Selecting, Designing, and Using Mathematical Tasks in K-6. 2 Hours.
PR: Consent. This is the first of four mathematics pedagogy courses in the elementary mathematics specialist endorsement program. Topics include identifying the cognitive demand of tasks, identifying influences of cognitive demand on student learning, instructional moves that maintain cognitive demand of tasks, and strategies for adapting tasks to increase cognitive demand. Tasks examined will cover a range of K-6 mathematics.

C&I 636. Learning Trajectories in Elementary Mathematics. 2 Hours.
PR: C&I 635. This is the second of four mathematics pedagogy courses designed for students pursuing the elementary mathematics specialist endorsement. This course examines research-based descriptions of learning trajectories for how children's thinking and understanding develop for specific mathematical content. Learning trajectories studied include those for quantity, counting, computation, and shape. Students will examine effective use of learning trajectories in instruction.

C&I 637. Classroom Practices for Effective Learning Environments in Elementary Mathematics. 2 Hours.
PR: C&I 636. This is the third of four mathematics pedagogy courses designed for students pursuing the elementary mathematics specialist endorsement. Students will examine strategies for developing a classroom environment that supports all students in learning mathematics. Emphasis will be placed on understanding teaching practices and pedagogical strategies identified in mathematics education research literature as being effective in supporting student learning.

C&I 638. Planning, Implementing, and Assessing Mathematics Instruction. 2 Hours.
PR: C&I 637. This is the fourth of four mathematics pedagogy courses designed for students pursuing the elementary mathematics specialist endorsement. This course provides opportunities for students to plan, implement, assess, and reflect upon their own mathematics instruction, drawing upon knowledge, skills, and practices developed in the prerequisite courses of the elementary mathematics specialist endorsement sequence.

C&I 639. Science Research and Technology Ethics. 3 Hours.
PR: Graduate Standing. Students learn basic concepts of responsible research conduct, public communication and teaching research ethics by way of on-line discussions, and peer-review of case-solutions/reasoning and application projects.

C&I 640. Science in the Elementary School. 3 Hours.
PR: 20 hours of undergraduate credit in elementary education or consent. Analysis of methods, curriculum patterns, and trends in elementary school science. Understanding and development of scientific attitudes appropriate at the elementary-school level.
C&I 643. Brain-Based Teaching and Learning. 3 Hours.
This course provides an integrative, interactive, and collaborative introduction to the emerging interdisciplinary field of brain-based teaching and learning. Through synchronous and asynchronous classroom discussions and applied exercises, students will draw on knowledge from neuroscience, cognitive psychology, biology, and education to explore the theoretical foundations, methods, and applications of teaching and learning from a brain-based perspective.

C&I 644. Science in the Secondary School. 3 Hours.
PR: C&I 602 and EDP 600 or appropriate professional experience. Nature and function of science in secondary schools supported by current research and development; includes analysis of structure and practice of science curriculum and instruction issues.

C&I 645. Global Climate Change. 3 Hours.
A graduate-level web-based course that presents the scientific evidence related to global climate change and the implications for science, technology and society.

C&I 646. Science: Native American Views. 3 Hours.
This course examines the science and non-scientific views in areas of health and healing, environment, and technological applications in traditional Native American and Western cultures.

C&I 647. Science and Mathematics Applications for Nutrition and Energy Content. 3 Hours.
This course is designed for teachers (4-12) of science or math. The course integrates nutrition and physical activity content applicable to students' lives.

C&I 648. Science/Technology: Society Perspectives. 3 Hours.
Course provides students with an understanding of the characteristic relationships between science, technology, and society. Course examines impacts of these relationships on social and natural communities.

C&I 649. History/Philosophy of Science. 3 Hours.
Examines the nature of science and how social forces have interacted with the process of science to promote the dynamic development of the current body of scientific knowledge.

C&I 650. Social Studies in the Elementary School. 3 Hours.
PR: C&I 602 and EDP 600 or consent. Comprehensive consideration of objectives, content, methods, including unit procedures; materials including objects, models, exhibits, and museum items, as well as textbooks, collateral reading, maps, and graphs; means of evaluating social growth and development.

C&I 654. Social Studies in the Secondary School. 3 Hours.
PR: C&I 602 and EDP 600 or consent. Nature and function of social studies in the secondary school; utilization of community, state, national, and world resources in teaching; selection of content for teaching purposes; curriculum construction with emphasis on resource and teaching units.

C&I 656. Challenges in Teaching History. 3 Hours.
This course will provide an initial exposure for pre-service social studies teachers to address the challenge of teaching controversial public issues of recent history.

C&I 657. Principles of Economic Education. 3 Hours.
Workshop for principals, teachers, and supervisors with emphasis on the economic structure of our society and methods of integrating economics into the school program. (Sponsored jointly by College of Human Resources and Education and College of Business and Economics.)

C&I 660. Classroom Simulation Techniques. 3 Hours.
To provide experience in the use of learning games and simulations as an instructional technique and simulated activities and games to be used in a variety of learning environments. (Alternate years.)

C&I 661. Computers in the Content Areas. 3 Hours.
Development of extensive curriculum units on the use of computers and other technologies in teaching and learning. Students will inform one another of various uses of computers in learning.

C&I 662. Hypermedia in Learning. 3 Hours.
Survey of theory, research, and application of hypermedia and the authoring language - Authorware.

C&I 663. Software Development. 3 Hours.
Principles and models of software design and the authoring language-HyperCard.

C&I 671. Assessing the Impact of Computer-Based Learning. 3 Hours.
Survey of the current findings in computer-based learning; couples statistical features and design scenarios.

C&I 677. Children's Television: Problems and Potentials. 4 Hours.
PR: Consent. Provides parents and teachers with strategies for monitoring, evaluating, and directing television viewing habits of youth; pertinent research studies, school and community action programs, and home and school education programs are discussed and practiced.

C&I 680. Technology Integration Through Capstone Experience. 3 Hours.
Capstone for elementary and secondary education programs.

C&I 681. Independent Research in Curriculum and Instruction. 1-6 Hours.
Faculty supervised study of topics not available through regular course offerings.
C&I 685. Supervision of Student Teachers. 3 Hours.
PR: Consent. For persons working or intending to work with education students in field experiences. Course focuses on the development and application of supervisory skills in effective guidance of student teachers and education students.

C&I 686. Teaching Strategies for Middle Childhood. 3 Hours.
Surveys instructional strategies appropriate for facilitating preadolescent learning. Includes the role of the teacher and how the teacher uses resources within and outside the classroom as they relate to instruction of the learner, age 10-14 years.

C&I 687. Advanced Teaching Strategies. 3 Hours.
PR: Graduate standing. Deals with methods as one critical variable in teaching. Examines ways and means to describe, plan the use of, implement, and evaluate teaching methods. Analysis and implementation of teaching methods and component skills of teaching.

C&I 688. Classroom Organization and Management. 3 Hours.
Discusses research identifying components of classroom organization and environment which influence learning; reviews teacher behaviors and learning activities which research indicates lead to more effective teaching. Stresses implementation strategies relevant to classroom settings.

C&I 689. Cultural Diversity in the Classroom. 3 Hours.
PR: Graduate standing or consent. Provides opportunities for educators to increase awareness of their own ethnic backgrounds, foster understandings of the inter-active effects of gender, race, ethnicity and socio-economic status, and develop appropriate teaching materials and methods.

C&I 691A-Z. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

C&I 692A-Z. Directed Study. 1-6 Hours.
Directed study, reading, and or research.

C&I 693A-Z. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

C&I 694A-Z. Seminar. 1-6 Hours.
Seminars arranged for advanced graduate students.

C&I 695. Independent Study. 1-6 Hours.
Faculty supervised study of topics not available through regular course offerings.

C&I 696. Graduate Seminar. 1 Hour.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

C&I 697. Research. 1-15 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.).

C&I 701. Curriculum Development. 3 Hours.
PR: Consent. The study of the concepts underlying school curriculum.

C&I 707. Theories, Models and Research of Teaching. 3 Hours.
PR: SCFD 620 or consent. The theories behind selected models of teaching as well as research in teaching and best practices.

C&I 708. Contemporary Determinants of Curriculum. 3 Hours.
PR: C&I 701 and SCFD 640 or consent. Contemporary determinants of curriculum development.

C&I 709. Curriculum Theories. 3 Hours.
PR: C&I 708 or consent. Theories underlying curriculum from the past to the present and projected to the future.

C&I 710. Advanced Supervision. 3 Hours.
PR: Consent. Exploring theories, research, and practices of pre-service and in-service instructional supervision in the classrooms of novice and mature teachers. (Also listed as EDLS 701).

C&I 719. Behavior Modification in Early Childhood Education. 3 Hours.
Application of behavior modification principles to classroom management in early childhood education Pre-K to 4th grade.

C&I 738. Survey of Major Issues in Mathematics Education. 3 Hours.
PR: Consent. Individual and group research on selected topics in mathematics education.

C&I 757. Social Studies Curriculum Development, K-12. 3 Hours.
PR: C&I 601 or C&I 604 and C&I 650 or C&I 654. Stresses the application of principles and procedures pertinent to the development of social studies programs in elementary and secondary schools. Strong emphasis will be placed on the analysis of current social studies curriculum materials.

C&I 786. Curriculum Evaluation. 3 Hours.
This course enables students to develop skills and strategies necessary for curriculum evaluation and improvement of programs. Included will be a historical review of evaluation and analysis of approaches to curriculum evaluation.
C&I 787. Professional Development for Teaching Effectiveness. 3 Hours.
PR: Advanced graduate standing or consent. Explores professional learning tools that lead to effective teaching; investigates the conditions that facilitate professional learning and effective teaching by examining the teacher, learner, content and environment; examines how educators study and resolve problems.

C&I 788. Higher Education Curriculum. 3 Hours.
Analysis and evaluation of post-secondary curriculum with emphasis on organizing, translating, and applying findings. Topics include curriculum shaping forces; institutional patterns; policy, components and change; and principles and techniques of development, experimentation, and evaluation.

C&I 789. Teaching in Higher Education. 3 Hours.
PR: Graduate standing. A general methods course involving instructional concepts and strategies for present/prospective faculty in higher education. Comprehensive consideration of objectives, planning criteria and methods, teaching strategies, and evaluation in meeting the needs of adult learners.

C&I 790. Teaching Practicum. 1-3 Hours.
PR: Consent. Supervised practice in college teaching of curriculum and instruction. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.).

C&I 791A-Z. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

C&I 792A-J. Directed Study. 1-6 Hours.
Directed study, reading, and/or research.

C&I 793A-Z. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

C&I 794A-Z. Seminar. 1-6 Hours.
C&I 794Z. Seminar. 1-6Hr. Seminars arranged for advanced graduate students.

C&I 795. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

C&I 796. Graduate Seminar. 1 Hour.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

C&I 797. Research. 1-15 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.).

C&I 798. Thesis or Dissertation. 1-6 Hours.
PR: Consent. This is an optional course for programs that wish to provide formal supervision during the writing of student reports (698), or dissertations (798). Grading is normal.

C&I 799. Graduate Colloquium. 1-6 Hours.
PR: Consent. For graduate students not seeking coursework credit but who wish to meet residency requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students who are not actively involved in coursework or research are entitled, through enrollment in their department's 699/799 Graduate Colloquium to consult with graduate faculty, participate in both formal and informal academic activities sponsored by their program, and retain all of the rights and privileges of duly enrolled students. Grading is S/U; colloquium credit may not be counted against credit requirements for masters programs. Registration for one credit of 699/799 graduate colloquium satisfies the University requirement of registration in the semester in which graduation occurs.

C&I 930. Professional Development. 1-6 Hours.
Professional development courses provide skill renewal or enhancement in a professional field or content area (e.g., education, community health, geology). These tuition-waived continuing education courses are graded on a pass or fail grading scale and do not apply as graduate credit toward a degree program.

C&I 931. Professional Development. 1-6 Hours.
Professional development courses provide skill renewal or enhancement in a professional field or content area (e.g., education, community health, geology). These tuition-waived continuing education courses are graded on a pass/fail grading scale and do not apply as graduate credit toward a degree program.

C&I 932. Profession Development. 1-6 Hours.
Professional development courses provide skill renewal or enhancement in a professional field or content area (e.g. education, community health, geology). These tuition-waived continuing education courses are graded on a pass/fail grading scale and do not apply as graduate credit toward a degree program.