

**ELEMENTARY EDUCATION:
THE EARLY YEARS (PRE-K-4) semester hours**

Research (3 semester hours)**	
ED 510 [†]	Applications of Educational Research (for master's degree students only) 3
Foundations (6 semester hours)	
Six hours from the following:	
ED 5150*	Early Childhood Development: Prenatal, Birth, Pre-K to Grade 4 3
ED 504	Social Foundations of Education 3
ED 506	School Law & Child Rights 3
ED 507*	Instructional Psychology 3
<i>or</i>	
ED 517*	Psychology of the School Age Child 3
Professional Core (24 semester hours)	
ED 5100*	Introduction to Teaching 1
ED 5200*	Foundations of Early Childhood 3
ED 5300*	Early Literacy Foundation & Assessment 3
ED 5400*	Social Studies 3
ED 5410*	Science Methods 3
ED 5420*	Math Foundations & Assessment 3
ED 5500*	Introduction to Special Education 3
ED 5600*	Literacy Instruction & Intervention for Learners with Diverse Needs 3
<i>(10 hours stage two field experience)</i>	
TED 5100*	Introduction to Instructional & Assistive Technologies 2
Student Teaching (9 semester hours)	
ED 5900*	Student Teaching 6
ED 6600*	Collaboration & Inclusion 3
TOTAL	30^{††}

*Required for certification.

[†]Students pursuing a master's degree and certification are required to take this course in research. The master's degree requires a minimum of 30 credit hours.

^{††}Approximately 36 credit hours are required to earn certification only. Approximately 42 credit hours are required to earn the master's degree and certificate with existing certification in pre-K-4.

ENGLISH & LANGUAGE ARTS EDUCATION[†] semester hours

Research (3 semester hours)	
ED 510	Applications of Educational Research 3
Foundations (6 semester hours)	
Six hours from the following:	
ED 503	Foundations of Educational Measurement . . . 3
ED 504	Social Foundations of Education 3
ED 505	Alternative Educational Models 3
ED 506	School Law & Child Rights 3
ED 507	Instructional Psychology 3
ED 508	History & Philosophy of Education 3
ED 509	Curriculum Theory 3
ED 518*	Adolescent Psychology 3
Professional Core (21 semester hours)	
Eighteen hours from the following:	
ED 513	Classroom Management & School Discipline 3
ED 524*	Teaching Reading in the Content Areas 3
ED 530	Creative Dramatics with Children 3
ED 531*	Teaching Writing 3
ED 532*	Adolescent Literature 3
ED 534*	Teaching English in the Secondary Curriculum 3
ED 537*	Teaching Grammar 3
ED 538	Sociolinguistics 3
ED 539	Literature for Children 3
ED 540	Folklore in the Classroom 3
ED 543	Needs & Nurture of Gifted Children 3
ED 549	Storytelling 3
ED 551	Introduction to Special Education 3
GLS 511	Shakespeare 3
GLS 516	Intercultural Communication 3
Three hours of an elective 3	
TOTAL	30[†]

[†]This program is only offered as a master's degree. See "Secondary Education."

*Required for certification.

HIGHER EDUCATION LEADERSHIP semester hours

Research (3 semester hours)	
ED 510	Applications of Educational Research 3
Foundations (15 semester hours)	
ED 625	Administration in Higher Education 3
ED 626	Organization & Governance in Higher Education 3
ED 627	Institutional Effectiveness in Higher Education 3
ED 640	History of Higher Education 3
ED 687	Current Issues in Higher Education 3
Electives (9 semester hours)	
ED 588	Special Topics 3
ED 691	Service Learning & Civic Engagement in Higher Education 3
ED 616	Student Development Theory 3
ED 617	Diversity in Higher Education 3
ED 619	Comparative & International Higher Education 3
ED 656	The College Student in America 3
ED 684	Legal Issues in Higher Education 3
ED 693	Women in Higher Education 3
ED 675	The American Community College 3
Capstone (3 credits)	
ED 697	Practicum in Higher Education Leadership . . 3
TOTAL	30

**HOME AND SCHOOL VISITOR
(SCHOOL SOCIAL WORK) semester hours**

Research (3 semester hours)	
ED 510	Applications of Educational Research 3
Foundations (9 semester hours)	
ED 506*	School Law & Child Rights 3
ED 518*	Adolescent Psychology 3
<i>or</i>	
A human development course** 3	
Professional Core (18 semester hours)	
ED 514*	Social Work Intervention Skills 3
ED 515*	Social Welfare Policy 3
ED 516*	School Social Work: An Integrative Approach . . 3
ED 544*	Multicultural Education 3
ED 553*	Curriculum Assessment & Instruction for Home & School Visitors 3
ED 624*	Teaching English Language Learners 3
ED 5500*	Introduction to Special Education 3
ED 5600*	Literacy Instruction & Intervention for Learners with Diverse Needs 3
ED 6600*	Collaboration & Inclusion 3
<i>Six hours from the following:</i>	
ED 513	Classroom Management & School Discipline . . 3
ED 543	Needs & Nurture of Gifted Children 3
ED 555	Current Issues in Elementary & Secondary Education 3
ED 564	Continuing Issues in Early Childhood Education 3
ED 582	Introduction to Sex Education 3
ED 624*	Teaching English Language Learners 3
ED 680	Foundations of Health Education 3
ED 681	Substance Abuse Education 3
Practicum (6 semester hours)	
ED 605/606*	Practicum in School Social Work I & II 6
TOTAL	36

*Required for home and school visitor certification. ED 605/606 may be waived in whole or in part, but only after review of a student's field experiences in a public school under the supervision of a home-and-school visitor.

**See the Center for Social Work Education Graduate Bulletin.

**HUMAN SEXUALITY and
SCHOOL COUNSELOR semester hours**

Research (3 semester hours)	
ED 510	Applications of Education Research 3
Foundations (9 semester hours)	
ED 503	Foundations of Educational Measurement . . . 3
ED 653	Models, Theories, & the Practice of Counseling . 3
ED 544	Multicultural Education <i>or</i>
HSED 501	Sexuality & Society in a Cross-Cultural Perspective 3
Professional Core (39 semester hours)	
ED 624	Teaching English Language Learners 3
ED 650	Introduction to School Counseling 3
ED 651	Career Counseling across the Lifespan 3
ED 652	Group Process & Dynamics 3
ED 659	Field Experience & Practice in Counseling . . 3
ED 5500	Introduction to Special Education 3
ED 6600	Collaboration & Inclusion 3
HSED 592	Concepts in Human Sexuality 3
HSED 593	Behavioral Foundations in Human Sexuality . . 3
HSED 625	Human Sexuality for the Education & Counseling Professional I 3
HSED 627	Foundations of Clinical Sexology 3
HSED 643	Theories of Development & Education in Human Sexuality 3
HSED 644	Biological Foundations of Human Sexuality . . 3
HSED 719	Sensitive Issues in Clinical Sexology 3
Practica and Internship (9 credits)	
ED 704-05	Internship in Elementary School Counseling . . 3
ED 706-07	Internship in Secondary School Counseling . . 3
HSED 690	Practicum in Human Sexuality Education 3
TOTAL	60

INSTRUCTIONAL TECHNOLOGY ⁺ *	semester hours
Research (3 semester hours)	
ED 510 Applications of Educational Research	3
Foundations (9 semester hours)	
ED 503 Foundations of Educational Measurement . . .	3
ED 507 Instructional Psychology	3
ED 509 Curriculum Theory <i>or</i>	3
ED 546 Analysis, Innovation, & Evaluation of Curriculum	3
Professional Core (18 semester hours)	
Eighteen hours from the following:	
TED 502* Software Application & Integration	3
TED 503 Computers for Educators	3
TED 504* Technology & Leadership	3
TED 505* Hardware/Software Systems	3
TED 521* The Internet for Educators	3
TED 530* Instructional Design & Integration	3
TED 531* Hypermedia Development & Application . . .	3
TED 532* Media Design & Integration	3
TED 533* Assistive Technology	3
TED 540* Internship in Instructional Technology	3
ED 551** Introduction to Special Education	3
ED 623** Literacy Intervention in the Content Areas for Learners with Disabilities	3
ED 624** Teaching English Language Learners	3
ED 695 Independent Study in Education	3
ED 667** Effective Collaboration & Team Building . . .	3
TOTAL	30[†]

⁺This program is offered in an online format.

*Required for instructional technology specialist certification.

**If this is the student's initial certification, then the following courses must also be taken: ED 551, ED 623, ED 624, ED 667.

[†]For students pursuing a master's degree and certification, more than 30 hours may be required.

For Mathematics Education, see "Secondary Education."

READING ⁺	semester hours
Research (3 semester hours)	
ED 510 Applications of Educational Research	3
Foundations (6 semester hours)	
ED 503* Foundations of Educational Measurement . . .	3
ED 507* Instructional Psychology	3
<i>or</i>	
ED 517* Psychology of the School Age Child	3
<i>or</i>	
ED 518* Adolescent Psychology	3
Professional Core (21 semester hours)	
Twenty-one hours from the following:	
ED 521* Reading & Language Arts I	3
ED 522* Reading & Language Arts II	3
ED 524* Teaching Reading in the Content Areas, Grades 4–12	3
ED 527* Practicum for Reading Specialists	6
ED 529* Role of the Reading Specialist in the School . . .	3
ED 531 Teaching Writing	3
ED 532* Adolescent Literature	3
<i>or</i>	
ED 539* Literature for Children	3
ED 535* Diagnosis & Remediation of Reading Difficulties	3
ED 536* Advanced Diagnosis & Remediation of Reading Difficulties	3
ED 537 Teaching Grammar	3
ED 551** Introduction to Special Education	3
ED 623** Literacy Intervention in the Content Areas for Learners with Disabilities	3
ED 624** Teaching English Language Learners	3
ED 667**& Effective Collaboration & Team Building . . .	3
TOTAL	30[†]

⁺This program is offered in an online format.

*Required for reading specialist certification depending upon background of applicant. Certification students must also enroll in and complete a student teaching or intern teaching experience if this is the initial certification. Additional undergraduate content courses may be required for certification. Consult an advisor.

**If this is the student's initial certification, then the following courses must also be taken: ED 551, ED 623, ED 624, ED 667.

[†]For students pursuing a master's degree and certification, more than 30 hours may be required, and the practicum ED 527 must be completed.

For Science Education, see "Secondary Education."

SECONDARY EDUCATION

Students can take secondary education as certification only or as a master’s degree with certification.

Available Certifications*

- biology
- chemistry
- earth and space science
- English/language arts
- French
- general science
- mathematics
- physics
- social studies
- Spanish

*Students must have the requisite background in the subject area or pass the Praxis content exam.

SECONDARY EDUCATION FOR MASTER’S DEGREE WITH CERTIFICATION OPTION semester hours

Research[†] (3 semester hours)

ED 510 Applications of Educational Research 3

Foundations (9 semester hours)

ED 503 Foundations of Educational Measurement . . . 3

ED 509 Curriculum Theory 3

ED 507 Instructional Psychology *or*

ED 518 Adolescent Psychology (10 hours stage two field experience) 3

Professional Core (18–24 semester hours)

ED 5100^{††} Introduction to Teaching (20 hours stage one field experience) 1

ED 513 Classroom Management & School Discipline . . 3

ED 551* Introduction to Special Education (10 hours stage two field experience) 3

ED 623* Literacy Intervention in the Content Areas for Learners with Disabilities 3

ED 624* Teaching English Language Learners (10 hours stage three field experience) 3

ED 667 Effective Collaboration & Team Building (SPED corequisite with student teaching) . . . 3

ED 599** Student Teaching 5

TED 5100 Instructional & Assistive Technologies 2

Field Experience for Secondary Educators*^{***} (120 hours stage three field experience) 3

Methods for Secondary Educators* (see advisor for appropriate course in math, English, etc.; 20 hours stage three field experience) 3

SPED Elective (if student teaching is NOT required) 3

TOTAL 30–36

[†]Students pursuing the master’s degree with certification are required to take an additional course in research.

^{††}Required for all graduate students who do not have an undergraduate background in education. It should be taken during the student’s first semester.

*Courses for certification only, not degree.

**Certification students must also enroll in and complete a student teaching or intern teaching experience if this is their initial certification.

***Taken three weeks prior to start of student teaching; may be waived for students with extensive field experience in education (i.e., substitute teaching, teaching assistance, etc.).

SOCIAL STUDIES EDUCATION* semester hours

Research (3 semester hours)

ED 510 Applications of Educational Research 3

Foundations (9 semester hours)

ED 508 History & Philosophy of Education 3

Six hours from the following:

ED 504 Social Foundations of Education 3

ED 505 Alternative Educational Models 3

or

ED 507 Instructional Psychology 3

ED 509 Curriculum Theory 3

ED 518 Adolescent Psychology 3

Professional Core (18 semester hours)

Nine hours from the following:

ED 506 School Law & Child Rights 3

ED 511 Introduction to Education 3

ED 513 Classroom Management & School Discipline 3

ED 515 Social Welfare Policy & the Educational Context 3

ED 524 Teaching Reading in the Content Areas, Grades 4–12 3

ED 543 Needs & Nurture of Gifted Children 3

ED 551 Introduction to Special Education 3

ED 594 Teaching Social Studies in the Secondary School 3

ED 623 Literacy Intervention in the Content Areas for Learners with Disabilities 3

ED 624 Teaching English Language Learners 3

ED 667 Effective Collaboration & Team Building . . . 3

Nine hours of electives 9

TOTAL 30[†]

*Master’s degree only. For initial certification, see Secondary Education.
[†]For students pursuing a master’s degree and certification, more than 30 hours may be required.

**SPECIAL EDUCATION:
ASSISTIVE TECHNOLOGY*** semester hours

Research (3 semester hours)	
ED 510 [†]	Applications of Educational Research 3
Foundations (6 semester hours)	
ED 503	Foundations of Educational Measurement . . . 3
ED 506	School Law & Child Rights 3
ED 507	Instructional Psychology 3
ED 513	Classroom Management 3
Professional Core (21 semester hours)	
<i>Select 2 or 3 of the following courses:</i>	
ED 551*	Introduction to Special Education 3
TED 502	Software Applications & Integration 3
TED 504	Technology and Leadership ³
TED 530	Instructional Design & Integration 3
TED 531	Hypermedia Application & Integration 3
TED 532	Media Design & Integration 3
TED 533	Introduction to Assistive Technologies ³
<i>At least 3 of the following 4 courses must be completed:</i>	
TED 534	Assistive Technologies for Individuals with Communication Disorders 3
TED 535	Assistive Technologies for Individuals with Sensory Impairments 3
TED 536	Assistive Technology Assessment for Special Education 3
ED 5710	Travel Instruction for Persons with Intellectual or Physical Disabilities 3
<i>A field-based practical experience is required:</i>	
TED 5710	Practicum in Assistive & Instructional Technology 3
TOTAL	30

*Students without previous coursework in foundations/introductions to special education must take ED 551 in their first semester.

[†]Required of all students pursuing a master's degree.

STUDENT AFFAIRS LEADERSHIP semester hours

Research (3 semester hours)	
ED 510	Applications of Educational Research 3
Foundations (15 semester hours)	
ED 616	Student Development Theory 3
ED 640	History of Higher Education 3
ED 656	The College Student in America 3
ED 687	Current Issues in Higher Education 3
ED 691	Service Learning & Civic Engagement in Higher Education (new course) 3
Electives (9 semester hours)	
ED 588	Special Topics 3
ED 618	Diversity in Higher Education 3
ED 619	Comparative & International Higher Education 3
ED 625	Administration in Higher education 3
ED 626	Organization & Governance in Higher Education 3
ED 627	Institutional Effectiveness in Higher Education 3
ED 675	The American Community College 3
ED 684	Legal Issues in Higher Education 3
ED 693	Women in Higher Education 3
Capstone Course (3 semester hours)	
ED 658	Practicum in Student Affairs Leadership 3
TOTAL	30

SUPERVISION semester hours

Research (3 semester hours)	
ED 510	Applications of Educational Research 3
Foundations (12 semester hours)	
ED 506*	School Law & Child Rights 3
Nine hours from the following:	
ED 502	Politics of Education 3
ED 504	Social Foundations of Education 3
ED 505	Alternative Educational Models 3
<i>or</i>	
ED 507	Instructional Psychology 3
ED 509	Curriculum Theory 3
Professional Core (15 semester hours)	
Fifteen hours from the following:	
ED 545*	Supervision in Public Education 3
ED 546*	Analysis, Innovation, & Evaluation of Curriculum 3
ED 547*	Seminar in School Leadership 3
ED 548**	Seminar in Pupil Personnel Services 3
ED 551*	Introduction to Special Education 3
ED 555	Current Issues in Elementary & Secondary Education 3
ED 583	The Education of Adults from a Developmental Perspective 3
ED 584	Program Development in Adult Education . . . 3
ED 660 [†]	Instructional Design in Special Education . . . 3
ED 623*	Literacy Intervention in the Content Areas for Learners with Disabilities 3
ED 624*	Teaching English Language Learners 3
ED 666 [†]	Supervision in Special Education 3
ED 667* [†]	Collaboration & Team Building 3
Practicum (6 semester hours), Required for Certification^{††}	
ED 601/602*	Practicum in School Supervision I & II 6
<i>or</i>	
ED 613/614**	Practicum in Supervision of Pupil Personnel Services I & II 6
<i>or</i>	
ED 677/678 [†]	Practicum in Special Education Supervision I & II 6
TOTAL	30^{††}

*Required for supervisor certification. Certification also requires a master's degree and five years of appropriate professional experience.

**ED 548 and ED 613/614 replace ED 546 and ED 601/602 for students seeking supervisor of pupil personnel services certification.

[†]In addition to ED 506, ED 545, ED 546, and ED 547, students seeking supervisor of special education certification must also complete ED 660, ED 666, and ED 667; ED 677/678 replaces ED 601/602.

^{††}For students pursuing a master's degree and certification, more than 30 hours may be required.

**SUPERINTENDENT
(LETTER OF ELIGIBILITY) semester hours**

Students seeking the Letter of Eligibility must have six years of teaching or other professionally certified service, three years of which must be in supervisory or administrative positions. Students must also consult with an advisor. The following are required:

ED 502	Politics of Education	3
ED 503	Foundations of Educational Measurement . . .	3
ED 506	School Law & Child Rights	3
ED 510	Applications of Educational Research	3
ED 545	Supervision in Public Education	3
ED 546	Analysis, Innovation, & Evaluation of Curriculum	3
ED 547	Seminar in School Leadership	3
ED 555	Current Issues in Elementary & Secondary Education	3
ED 666	The School Leader's Role in Special Education	3
ED 715	School Architecture & Plant Management . . .	3
ED 718	Values & Ethics in Education	3
ED 745	Leadership, Communication, & Decision Making	3
ED 746	Financial Management Concepts for School Administrators	3
ED 747	Personnel Management Concepts for School Administrators	3
ED 750	Organization & Administration of K–12 Schools	3
ED 820	Policy Development in Education	3
ED 845	Special Topics for School Administration I	3
ED 846	Special Topics for School Administration II . . .	3
ED 801/802	Internship in School Superintendency	6
TOTAL		60

DOCTOR OF EDUCATION

GOALS

The goals of the doctor of education programs at Widener University are rooted in the mission and goals of the university itself. To that end, the doctoral programs are committed to the following:

- to foster an understanding of theory and its relevance to problem solving, and the expansion of our knowledge base.
- to contribute to the improvement of leadership by encouraging the spirit of critical inquiry and analysis through problem solving.
- to anticipate future societal trends and needs, and to be able to develop plans of action to meet those needs.

ADMISSION

Criteria for admissions to the doctoral programs include:

- a bachelor's degree from an accredited institution.
- documentation of appropriate professional background and experience in postsecondary education or in related fields.
- satisfactory academic performance in previous baccalaureate and post-baccalaureate activity. (To satisfy this criterion, students must have achieved a GPA of 3.5 in academic work completed at the master's level or a GPA of 3.0 for work completed at the bachelor's level.)
- two letters of recommendation.
- submission of scores on either the MAT or GRE (MAT is preferred). (Like all predictive measures of achievement, standardized test scores must be interpreted in the context of overall academic achievement.)
- An interview with a program faculty advisor for higher education and human sexuality applicants.
- a writing sample. (Contact the Writing Center at 610-499-4332 to make an appointment to do this.)

International Students

International students should consult the International Student Services web page at www.widener.edu for international graduate student guidelines or contact the Office of International Student Services at Widener University, One University Place, Chester, PA 19013; phone: 610-499-4499.

MATRICULATION AND ACADEMIC PROGRESS

A matriculated student is one who has been officially accepted into a doctoral program. Students may register for a maximum of six credits prior to achieving matriculated status. Students should meet regularly with their assigned academic advisors, beginning as soon as possible after admission, to plan their program of study.

All students are expected to maintain satisfactory rates of progress toward their degrees, beginning with the first course in which they enroll and in all subsequent courses. If a student earns a grade of B– or below, the course may be repeated only once. Both grades will be recorded on the transcript, but only the most recent grade will be used in calculating the GPA. When a student is found to have violated Widener's academic fraud policies, that student is prohibited from exercising the repeat-of-course option to remove the F grade (given as a result of fraud) from the GPA calculation. To graduate, students must achieve an overall GPA of 3.0 on a standard 4.0 system. No student will graduate from education programs with an incomplete grade.

DOCTORAL CANDIDACY

Doctoral candidacy occurs upon successful completion of the comprehensive examination and requires continuous enrollment.

CONTINUOUS ENROLLMENT

Candidacy requires students to enroll continuously in an ED 901, 902, 903, and 999 sequence of dissertation seminars for a minimum of 18 credits. The process of working on the dissertation should be a continuous one, and these courses are more in the nature of highly individualized independent studies than seminars. Students should observe the following sequence of registration for dissertation study:

ED 901	3 credits
ED 902	3 credits
ED 903	3 credits (Students who have not successfully defended the dissertation proposal at the end of ED 902 must maintain continuous enrollment in ED 903 until the dissertation proposal has been accepted following a formal defense.)
ED 999A	6 credits (must be taken for six credits)
ED 999A	6 credits (must be taken for six credits)
ED 999B	3 credits (Students will take this course for additional semesters as needed until the dissertation is completed. See below.)

The requirement of 12 semester hours (two six-credit semesters) of ED 999 is a minimum requirement. If the dissertation is not completed within 12 semester hours, students must continuously enroll for additional dissertation credit until they have successfully defended the dissertation. (See "Dissertation" section for additional information.) Students must be enrolled or pre-registered for the upcoming semester to maintain library privileges during the summer and winter break.

LEAVE OF ABSENCE

Those individuals who have achieved candidacy and are unable to remain continuously enrolled during any semester must petition the dissertation chair for a leave of absence. The "Petition for an Approved Leave of Absence" is available in the associate dean's/director's office in the Division of Education. A petition must be submitted during any semester when a student is not continuously enrolled. A leave of absence may not exceed two years or four academic semesters. Exceptions may be granted only by the associate dean of the Division of Education in consultation with the student's dissertation chair. Students who are on leave of absence shall have no access to professors or facilities. On returning from leave of absence, students must petition to be reassigned to a dissertation chair. Students should also know that in taking a leave, the currency of their dissertation study may be affected.

COMPREHENSIVE EXAMINATION

Students must pass a comprehensive examination that will be administered following the completion of 60 semester hours of course work. The examination will be composed of written portions covering topics included in the program of studies in the field of higher education, human sexuality, reading/language arts, or school administration. Students must pass all parts of the examination. If a student fails to pass the examination or any portion thereof, he or she may retake the exam or portion of the exam one time. Two consecutive failures will result in dismissal from the program. Policies and procedures governing these examinations are available in the *Handbook for Doctoral Students*. Doctoral students must have all grades of Incomplete changed to a course grade before petitioning to take the comprehensive examination.

FINANCIAL CLEARANCE

Students must be financially cleared if they are to be advised during the dissertation process. Students who are not financially cleared by the census date set by the Registrar's Office forfeit continuous enrollment status. Such individuals may either (a) complete a "Petition for an Approved Leave of Absence," or (b) request retroactive reinstatement from the dean of the School of Education, Innovation, and Continuing Studies. Students who have achieved candidacy must petition their dissertation chairs for a leave of absence.

DISSERTATION

The dissertation experience requires a minimum of 18 semester hours. Students should enroll in ED 901 (3 credits) immediately after successful completion of the comprehensive examination. The sequence of subsequent courses should be as follows: ED 902 (3 credits), ED 999 (6 credits), ED 999 (6 credits). If a student has not defended the dissertation proposal in ED 902, then the student must register for ED 903 each semester until the proposal has been accepted. (See "Continuous Enrollment" section for additional information.) If the dissertation has not been completed, then the student must register for 3 credit hours of ED 999 each succeeding semester. (See the *Handbook for Doctoral Students* for more information regarding dissertations.)

The dissertation problem addressed by the candidate's research must pertain to higher education, human sexuality, reading/language arts, or one of the four tracks in school administration. The scope of the project must be such that it will contribute to improved practice within the field and not be limited to an institutional problem. Students must complete their doctoral dissertations within four years of doctoral candidacy.

TRANSFER CREDIT

Transfer credit will be considered on an individual basis. This decision will be made after the time of admission, by a student's academic advisor. A decision to award transfer credit will be based on the recency and similarity of courses required by a program of study. A grade of A, B, or Pass is required for transfer credit. All decisions regarding transfer credit rest with the faculty of the Division of Education. Research courses can only be approved for transfer credit by a member of the research committee following a syllabus review. The maximum amount of transfer credits varies by program and ranges from 15 to 24.

DEGREE REQUIREMENTS

The minimum requirements for the doctoral degree are the completion of 78 semester hours of graduate credit, successful completion of the comprehensive examination, and completion of the doctoral dissertation. A minimum of 60 semester hours of course work must be completed before a student can sit for the comprehensive examination. After passing all three parts of the comprehensive examination, the student may begin the doctoral dissertation. The doctoral dissertation phase includes a minimum of 18 credit hours of Dissertation Seminar and Dissertation Research related to the dissertation activity. Please note that a waiver of any requirement for the degree must be approved in writing by the student's academic advisor and the associate dean of the Division of Education.

AREAS OF STUDY

FOUNDATIONS OF EDUCATION

These courses investigate fundamental concepts, theories, and principles which ground the study of historical and philosophical aspects of pedagogy, administration, and governance, as well as curriculum and contemporary problems of leadership.

RESEARCH

Research courses examine research methodology, educational measurement, and educational statistics. The research series is intended to achieve the following aims of inquiry: becoming independent scholars; becoming critical consumers of educational research; making connections between quantitative/qualitative research and educational policymaking; applying statistical techniques to solve pedagogical problems; understanding how statistical methods can be used to show how information about school-based practices can lead to development of educational theory; and making decisions about practices that are informed by quantitative/qualitative analysis.

PROFESSIONAL CORE

These courses expose students to the study of the major discipline through organizational dynamics and the administration and governance of educational institutions and programs.

ELECTIVES

Students select elective credits in consultation with their advisors. Graduate courses in the humanities, social sciences, or natural sciences broaden the student's perspective and thereby enhance his or her leadership and decision-making capabilities. These courses also acquaint the student with the concerns and approaches to teaching of university faculty in academic areas generally represented in institutions of higher education.

DOCTOR OF EDUCATION IN HIGHER EDUCATION LEADERSHIP

Foundations (18 semester hours)

ED 626	Organization & Governance in Higher Education
ED 627	Institutional Effectiveness in Higher Education
ED 640	History of Higher Education
ED 656	The College Student in America
ED 719	Proseminar in Higher Education
ED 730	Writing for Academic Research

Research (12 semester hours)

ED 510	Applications for Educational Research
ED 714	Qualitative Research Methods in Education
ED 850	Advanced Quantitative Research Methods I
ED 851	Advanced Quantitative Research Methods II

Practice Core (12 semester hours)

*Academic Leadership**

ED 687	Current Issues in Higher Education
ED 734	Leadership in Higher Education
ED 736	Assessment of Student Learning
ED 793	Teaching & Learning in Higher Education

*Administrative Leadership**

ED 625	Administration in Higher Education
ED 687	Current Issues in Higher Education
ED 734	Leadership in Higher Education
ED 890	Resource Development & Finance in Higher Education

Professional electives (18 semester hours)

ED 617	Diversity in Higher Education
ED 619	Comparative & International Higher Education
ED 629	Student Affairs in Higher Education
ED 675	The American Community College
ED 684	Legal Issues in Higher Education
ED 693	Women in Higher Education
ED 744	Faculty Professional Development in Higher Education
ED 893	Scholar Practitioner Leadership Project (requires advanced faculty approval) (new course)

Dissertation (Minimum 18 hours)

ED 901	Dissertation Seminar I
ED 902	Dissertation Seminar II
ED 999	Dissertation Research (12 semester hours)
Total Credits: 78 (60 + dissertation credits)	

TOTAL CREDITS **78 (60 + dissertation credits)**

**With the approval of their advisor, students may take courses from the practice core outside of their program focus area.*

**DOCTOR OF EDUCATION IN
READING/LANGUAGE ARTS**

*Select one of the two following tracks or
meet with an advisor to design a program of study.*

READING DIAGNOSTICIAN TRACK

Foundations (9 semester hours)

ED 712	History & Philosophy of Reading Education
ED 718	Values & Ethics in Education
ED 827	Reading Research: Past, Present, & Future

Research (12 semester hours)

ED 510	Applications of Educational Research
ED 714	Qualitative Research Methods in Education
ED 850	Advanced Quantitative Research Methods I
ED 851	Advanced Quantitative Research Methods II

Professional Core (30 semester hours)

ED 723	Correlates of Reading
ED 724	Word Identification & Vocabulary Development
ED 725	Comprehension: Theories & Practice
ED 726	Developmental Psycholinguistics
ED 727	Assessment of Intellectual Functioning
ED 728	Reading/Learning Disabilities: Diagnosis & Treatment
ED 823	Ethnographic Study of Language
ED 824	Seminar in the Psychology of Language
ED 830	The Brain & Its Development
ED 840	Practicum in Advanced Clinical Experience in Reading Diagnosis

Electives (9 semester hours)

Dissertation (18 semester hours)

ED 901	Dissertation Seminar I
ED 902	Dissertation Seminar II
ED 999	Dissertation Research (12 semester hours)

TOTAL CREDITS **78 (60 + dissertation credits)**

READING LEADERSHIP TRACK

Foundations (9 semester hours)

ED 712	History & Philosophy of Reading Education
ED 718	Values & Ethics in Education
ED 827	Reading Research: Past, Present, & Future

Research (12 semester hours)

ED 510	Applications of Educational Research
ED 714	Qualitative Research Methods in Education
ED 850	Advanced Quantitative Research Methods I
ED 851	Advanced Quantitative Research Methods II

Professional Core (30 semester hours)

ED 529	The Role of the Reading Specialist in the School
ED 723	Correlates of Reading
ED 724	Word Identification & Vocabulary Development
ED 725	Comprehension: Theories & Practice
ED 726	Developmental Psycholinguistics
ED 740	Professional Development in Literacy Education
ED 745*	Leadership, Communication, & Decision Making
ED 823	Ethnographic Study of Language
ED 824	Seminar in the Psychology of Language
ED 841	Practicum in Advanced Clinical Experience in Reading/LA Supervision

Electives (9 semester hours)

ED 506*	School Law & Child Rights
ED 545*	Supervision in Public Education
ED 547*	Seminar in School Leadership

Dissertation (18 semester hours)

ED 901	Dissertation Seminar I
ED 902	Dissertation Seminar II
ED 999	Dissertation Research (12 semester hours)

TOTAL CREDITS **78 (60 + dissertation credits)**

**Required for the supervisor certificate. ED 601 and ED 602,
Practicum in School Supervision I & II, are also required for the
supervisor certificate.*

**DOCTOR OF EDUCATION
IN SCHOOL ADMINISTRATION:
K–12 EDUCATIONAL LEADERSHIP**

Foundations (15 semester hours)

ED 508	History & Philosophy of Education
ED 547	Seminar in School Leadership
ED 718	Values & Ethics in Education
ED 745	Leadership, Communication, Decision-making
ED 820	Policy & Public Relations in K–12 Education

Research (15 semester hours)

ED 503	Foundations of Education Measurement
ED 510	Applications of Educational Research
ED 714	Qualitative Research Methods in Education
ED 850	Advanced Quantitative Research I
ED 851	Advanced Quantitative Research II

Professional Core (24 semester hours)

Instructional Technology Leadership:

ED 506*	School Law
ED 545	Supervision in Public Education
ED 667	Collaboration & Team Building
TED 502	Software Application & Integration
TED 504*	Technology & Leadership
TED 521	Internet for Educators
TED 532	Media Design
TED 533	Assistive Technology
TED 701*	Advanced Web Page Design
TED 702*	Advanced Integration & Technology Design
TED 703*	Advanced Digital Media Concepts
TED 801*	Technology Issues in K–12 Education

Pupil Services Leadership:

ED 506*	School Law
ED 545	Supervision in Public Education
ED 548	Seminar in Pupil Personnel Services
ED 652	Group Process & Dynamics
ED 660	Instructional Design in Special Education
ED 746	Financial Management Concepts
ED 747	Personnel Management
ED 855	Current Issues in Pupil Services

School System Leadership:

ED 506*	School Law
ED 545	Supervision in Public Education
ED 546	Analysis, Innovation, & Evaluation of Curriculum
ED 555	Current Issues in Elem. & Sec. Education
ED 666	School Leader's Role in Special Education
ED 715	School Architecture & Plant Management
ED 746	Financial Management Concepts
ED 747	Personnel Management
ED 750	Organization & Administration of K–12 Schools
ED 845/846*	Special Topics in School Administration I/II

Electives (6 Semester Hours)

TOTAL CREDITS **78 (60 + dissertation credits)**

*Required concentration course

Courses

Education (ED)	21
Human Sexuality (HSED)	37
Instructional Technology Education (TED)	37
Mathematics Education (MAED)	39
Science Education (SCED)	40

EDUCATION

ED 501 ANTHROPOLOGY IN EDUCATION

Introduces students to major issues and concepts in anthropological studies of education; surveys current methods of ethnographic research; evaluates existing anthropological research in education. 3 semester hours

ED 502 POLITICS OF EDUCATION

Examines political issues in education and how they are resolved. Current topics for discussion include multicultural education, school choice, values education, and teacher accountability. Also studied are the internal power struggles in the school system, how powerful interest groups affect the curriculum, and the role of federal and state agencies. 3 semester hours

ED 503 FOUNDATIONS OF EDUCATIONAL MEASUREMENT

Explores the role of measurement, testing, and evaluation in education. Topics included are the principles of test construction, issues relating to the reliability of measurement instruments, methods of assessing the validity of test procedures and instruments, and techniques of item analysis. In addition, the course provides students with background information regarding the various sources of information about standardized tests, and specifically reviews major testing tools used in intelligence, aptitude, and standard academic achievement areas. Other topics include the measurement of interests and attitudes, personality, social development, and alternate assessment. Readings and discussions also focus on the issues of the ethics of educational evaluation, testing, and methods for disseminating and reporting test information. 3 semester hours

ED 504 SOCIAL FOUNDATIONS OF EDUCATION

This course examines models of the school and their relationship to the economy, organizational structure, cultural diversity, the family, and the nature of democratic consensus. Particular emphasis is given to investigating how the interaction of these various factors affects schooling practice and governance at all levels of the educational enterprise. In addition, it aims at developing analytic skills that tie in theory to educational practice. 3 semester hours

ED 505 ALTERNATIVE EDUCATIONAL MODELS

As educational systems move into the 21st century, classrooms and students are changing. Conventional approaches to educational instruction and organization may not continue to provide the most effective methods to facilitate learning and deal with the complexity and diversity of changing student populations. In this course, students explore issues and problems confronting teachers today. A problem-solving approach to curriculum development and delivery is examined. Alternative models are presented and analyzed. 3 semester hours

ED 506 SCHOOL LAW AND CHILD RIGHTS

Provides public school personnel with a basic working knowledge of the legal structure of public education. The course also acquaints educators and nonteaching educational professionals with information on the current state of pressing legal issues affecting education. Where possible, particular attention is paid to school systems within Pennsylvania. A special concern of this course is the rights of children within the legal system. 3 semester hours

ED 507 INSTRUCTIONAL PSYCHOLOGY

This course provides a critical survey of psychological theories that have influenced the field of education, with a focus on application. Social and psychological influences on behavior and motivation are examined in-depth along with current, cognitive models regarding perception, memory, and learning. Developmental and individual differences are also studied. Pre- or corequisite: ED 511. 3 semester hours

ED 508 HISTORY AND PHILOSOPHY OF EDUCATION

This course surveys the history of schooling with a particular focus on schooling in the United States together with the philosophies that influenced them. It focuses on how such philosophies still influence decision making in present approaches to schooling. In addition, it aims at developing analytic skills that tie in theory to educational practice. 3 semester hours

ED 509 CURRICULUM THEORY

The development and current character of the field of curriculum are “sets of intended learnings” for this course. Through historical, political, social, and economic analysis of curriculum development, the course traces the efforts and outcomes of contemporary problems and practices in curriculum development. Curriculum specialists in the field will make presentations on current curriculum trends. 3 semester hours

ED 510 APPLICATIONS OF EDUCATIONAL RESEARCH

Designed to help instructors read educational research and understand research methods in education so they can apply recent developments in their own teaching environments. 3 semester hours

ED 511 INTRODUCTION TO EDUCATION

In this course, students explore the role of the classroom teacher as a facilitator of learning and as a member of the educational community. This course provides an overview of the field of education from a practical perspective. This course introduces the professional responsibilities common to teachers of all grade levels, such as writing lesson plans, planning units of instruction, managing classroom behavior, integrating technology into the classroom, and working with students from diverse ethnic and socio-cultural backgrounds. This course is required for all graduate students who are planning to enter the field of education and do not have an undergraduate background in education, and should be taken during the students’ first semester. This course contains a fieldwork component in a classroom setting. Prerequisite: All students must have required clearances before the semester begins. Please contact the Office of Field Experience for more information. 3 semester hours

ED 513 CLASSROOM MANAGEMENT AND SCHOOL DISCIPLINE

A study of the issues involved with the control of behavior in a classroom setting. Topics include the identification of inappropriate behavior, psychological referral processes, psychological models for behavioral management in a classroom setting, educational

solutions for inappropriate behavior, and the impact of inclusion upon classroom control. In addition, students have the opportunity of exploring the ethical, legal, and moral issues involved in various approaches to the management of behavior in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 514 SOCIAL WORK INTERVENTION SKILLS FOR THE EDUCATIONAL SETTING

Topics include social work philosophy, values, goals, and methods of intervention. Communication skills and interviewing techniques are stressed. Social work theory, as it relates to practice in the educational setting, is covered through class presentations, discussions, readings, and exercises. 3 semester hours

ED 515 SOCIAL WELFARE POLICY AND THE EDUCATIONAL CONTEXT

An in-depth exploration of major elements of the social welfare structure, as well as an introduction to the methods used in analysis and evaluation of social welfare policies. Special emphasis is placed on those policies relating to children. 3 semester hours

ED 516 SOCIAL WORK IN THE SCHOOLS, AN INTEGRATIVE APPROACH

A seminar course to be taken concurrently with ED 606. This course provides a final integrative piece for the curriculum related to school social work and addresses issues relating to the direct practice of school social work within diverse educational settings. It brings together theory and skills from all other courses within the school social work curriculum and helps students apply this information to direct work with clients in the school. Corequisite: ED 606. 3 semester hours

ED 517 PSYCHOLOGY OF THE SCHOOL AGE CHILD

An examination of psychomotor, cognitive, emotional, and social development. Theories of behavior and functioning during middle childhood are examined with respect to their descriptive accuracy, integrative ability, and underlying assumptions. Emphasis is placed upon an understanding of the interaction and integration of developmental themes. Pre- or corequisite: ED 511. 3 semester hours

ED 518 ADOLESCENT PSYCHOLOGY

This course explores the issues of socialization and social development, deviate and delinquent behavior, cognition and intellectual development, and the evolving self-understanding of adolescents. Topics include moral development, physiological changes and physical growth, and psychosexual development. Students review major theoretical approaches to understanding the development of the adolescent. Pre- or corequisite: ED 511. 3 semester hours

ED 519 EARLY CHILDHOOD DEVELOPMENT: FROM BIRTH TO THE EARLY SCHOOL YEARS

An inquiry into psychomotor, cognitive, emotional, physical, and social development during early childhood (i.e., from birth to eight years of age). Students critically review major theoretical approaches and social policy issues germane to early childhood development. There is an emphasis on the impact of family and school contexts on children’s development. 3 semester hours

ED 520 TEACHING READING TO THE NEW ADULT LEARNER

This course focuses on helping adults who have encountered difficulty reading and writing. Adult learning theory and teaching strategies to improve word identification, reading vocabulary,

and comprehension skills, as well as writing ability, are explored. Other topics include motivation strategies, preparation for the GED, and family literacy. Opportunities to work directly with learners are included. 3 semester hours

ED 521 READING AND LANGUAGE ARTS I

This course is a comprehensive introduction to the field of reading and language arts. Topics include the study of emergent literacy/language development; theories of reading; and the connection of reading, writing, listening, and speaking. Students gain a theoretical background in the study of the reading process and the writing process from a holistic perspective, and learn methods of developing comprehension and word recognition skills, as well as writing skills. This course contains a fieldwork component in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 522 READING AND LANGUAGE ARTS II

A continuation of ED 521, this course focuses on the development of reading and writing skills. Topics include content reading, reading/writing workshops, the tools of writing, and student assessment. A study of ways to meet the reading, writing, and spelling needs of divergent learners within the regular classroom will be stressed, as well as the use of computers and family literacy. This course contains a fieldwork component in a classroom setting. Prerequisite: ED 521. 3 semester hours

ED 524 TEACHING READING IN THE CONTENT AREAS, GRADES 4–12

Intended for teachers and others who are responsible for instruction in mathematics, science, social studies, English, and other content area subjects, this course covers methods for teaching students how to read content area material and use study skills. Those enrolled learn methods for organizing instruction, teaching content area concepts, and evaluating and using materials for instruction. This course contains a fieldwork component in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 527 PRACTICUM FOR READING SPECIALISTS

This course provides students with the opportunity to learn how to plan and implement a prescription for the remediation of an individual's reading and writing disability. Comprehensive record-keeping procedures are used to show progress toward established goals. Each student has supervised responsibility for the remediation of disabled readers. Prerequisites: ED 521, 522, 524, 529, 535, 536, and either ED 532 or 539. Students who are not already certified teachers must also have completed ED 598 and 599 prior to beginning the practicum. 6 semester hours

ED 528 ADULTS AS LEARNERS AND READERS

An exploration of how adults learn and communicate with a focus on assessment and implementation of strategies that enhance reading and writing. This course is designed for those who interact with adults in educational or business settings. Prerequisite: ED 583 or permission of the instructor. 3 semester hours

ED 529 THE ROLE OF THE READING SPECIALIST IN THE SCHOOL

Designed for advanced students in the field of reading. A review of recent research in reading and language arts and their application to instructional practices is addressed. This course also considers the relationship of the reading specialist to the organization of the total school program and to individual staff members. Evaluation and improvement of established reading programs

are emphasized. Prerequisites: ED 521, 522, 524, 535, 36, and either ED 532 or 539. 3 semester hours

ED 530 CREATIVE DRAMATICS WITH CHILDREN

This course provides teachers with the skills to revise language arts curricula and other elementary curricular areas to include the use of creative drama. Students work both individually and in groups to devise new approaches to teaching and learning. Topics include improvisational drama, films, pantomime, character development, puppetry, and story dramatization. Basic principles of theater craft are also included in this course. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 531 TEACHING WRITING

Designed for pre-service and in-service teachers responsible for writing instruction in grades 1–12, this course focuses on the theories, approaches, methods, and their implications on the teaching of writing. Motivation, process, assessment, resources, computer literacy, and current writing models are emphasized in this course. Various writing programs, holistic scoring, special needs of special students, portfolios, and research options are also explored through opportunities to experience each. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 532 ADOLESCENT LITERATURE

Intended for those who teach adolescents, this course will provide the opportunity to experience activities related to the nature, structure, and role of literature written for today's teenaged population. Of primary concern will be the selection and evaluation of appropriate adolescent literature, methods of motivating and sustaining student interest, genre selection, designing thematic and socially relevant topics, censorship, and the use of multimedia and other forms of instructional technology aimed at this age group with attention to students having special needs. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 534 TEACHING ENGLISH IN THE SECONDARY CURRICULUM

Designed as a comprehensive treatment of the role of the English teacher as facilitator for learning, as classroom manager, and as decision maker, this course examines, analyzes, and assesses the four major areas of responsibility: reading, writing, listening, and speaking. Current theories, approaches, methods, and their applications will be of primary importance. Resources, instructional technology, and computer utilization will also be examined. Standards recommended by the National Council of Teachers of English will be emphasized throughout. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 535 DIAGNOSIS AND REMEDIATION OF READING DIFFICULTIES

This course introduces students to causes of difficulties in reading and writing. Definitions of reading and writing disabilities are examined. Students learn to administer both formal and informal assessments, analyze findings, summarize results, and make recommendations for remediation in the case study format. Strategies to meet the needs of divergent learners are explored. Prerequisites: ED 510, 521, 522, 524, 532 or 539, 598, and 599. 3 semester hours

ED 536 ADVANCED DIAGNOSIS AND REMEDIATION OF READING DIFFICULTIES

Different diagnostic tests and methods are used to analyze difficulties experienced by reading/writing-disabled students. Class members gain a broad knowledge of formal and informal assessment procedures including intellectual functioning and emergent

literacy. Prerequisites: ED 510, 521, 522, 524, 532 or 539, and 535. 3 semester hours

ED 537 TEACHING GRAMMAR

The purpose of this course is to examine the origin, nature, and function of grammar. Of primary importance is the parts of speech; phrases, clauses, sentences; sentence structure and form; punctuation; and graphic representation. Students are given the opportunity to examine and to practice teaching grammar in the context of writing. Teaching approaches and techniques are also presented. The role of technology and its application to the teaching of grammar are included. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 538 SOCIOLINGUISTICS

This course provides an introduction to studies and applications of sociolinguistics for teachers whose students are either speakers of another dialect of English, or speakers of other languages who acquire English as their second language. Students become familiar with the literature of sociolinguistics concerning educational considerations in teaching bidialectal and bilingual students. Students apply linguistic analyses of Black English and 'academic' English, and Spanish and English, in preparing teaching materials that are appropriate and valid for alleviating some of the learning problems that may be caused by language or language-related differences. 3 semester hours

ED 539 LITERATURE FOR CHILDREN

Students evaluate and discuss children's literature from birth to grade 6. Emphasis is on the appreciation of various genres with focus on the multicultural aspect of each. Students also explore strategies including drama and the arts to help children respond to literature in the classroom. This course contains a fieldwork component in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 540 FOLKLORE IN THE CLASSROOM

Regarded as one of the highest interest and strongest of interdisciplinary subjects, folklore has tremendous potential in today's classroom regardless of grade level or content area. After having defined folklore and its four major divisions—oral narrative, belief systems, material culture, and popular culture—attention will be given to the adaptation of folkloric material to each teacher's area of concentration. The end result will be another curricular tool that can be used to instruct, enrich, further expand, and instill curiosity in the given academic discipline and grade level. Ethnographic field research, folk resources, interview and field methods, and assessing folk from "fake" material will be thoroughly explored. 3 semester hours

ED 541 PSYCHOLOGICAL, AFFECTIVE, AND COUNSELING NEEDS: IMPLICATIONS FOR THE GIFTED AND TALENTED

Examines psychosocial concepts related to personality, development, and creativity. Students investigate motivation, self-concept, and under-achievement in terms of their implications for the gifted and talented. Also explored are interventions by counselors, teachers, and parents that are intended to meet the unique psychological and affective needs of gifted and talented students. 3 semester hours

ED 542 IDENTIFICATION, DIAGNOSIS, AND EVALUATION OF THE GIFTED

Provides an opportunity to analyze some of the past and present definitions of giftedness, review studies that deal with characteristics of gifted students, and formulate definitions of giftedness that

correlate with the practical needs of school personnel and are defensible in terms of what research has suggested is true of gifted students. Students will be provided with an opportunity to design an instructional framework that will facilitate a comprehensive course of action for the assessment and evaluation of gifted students and their educational performance. 3 semester hours

ED 543 NEEDS AND NURTURE OF GIFTED CHILDREN

This course provides a study of the particular developmental characteristics of gifted children and an overview of the methods of identification of gifted children. Also included are teaching methods that are appropriate to the special learning and cognitive skills of such children. The implications of P.L. 94-142 with respect to gifted children are discussed, and the development of individualized educational programs for gifted children is reviewed. Prerequisite: ED 507 or ED 517 or permission of the instructor. 3 semester hours

ED 544 MULTICULTURAL EDUCATION

The focus of this course is to establish a forum to discuss the subject of diversity in a constructive way. The discussion of diversity often results in misunderstanding and lack of forthrightness. This course serves as a starting point for dialogues on the impact of diversity. 3 semester hours

ED 545 SUPERVISION IN PUBLIC EDUCATION

Students study the different models of supervision, emphasizing philosophy, supervisory styles, teaching styles and student learning, teacher development, observation and conference techniques, peer relations, and personnel implications. Current issues and problems are discussed. This course is intended for those educators who are aspiring to become (or who presently are) supervisors, department heads, curriculum directors, or school principals. 3 semester hours

ED 546 ANALYSIS, INNOVATION, AND EVALUATION OF CURRICULUM

Participants have the opportunity to examine and analyze various components of the total K-12 instructional program, to determine effective means of evaluating curriculum strategies, and to develop realistic and promising approaches for designing an innovative curriculum. Technology is studied as a discipline in itself and as a system to revise curricular structure and instructional methods. Academic standards and testing are examined. Individual participants have the opportunity to incorporate these processes into their current professional activity, to study in detail a particular discipline, and to plan for future supervisory or administrative responsibilities. 3 semester hours

ED 547 SEMINAR IN SCHOOL LEADERSHIP

Students explore interpersonal relationships in the administration of education programs. The course emphasizes traits, behaviors, and theories of effective educational leadership. Organizational influences, communications, and decision-making are examined. The course focuses on contemporary problems and managing conflict through the reading and discussion of scenarios and cases on topics such as employee relations, community relations, budget and finance, ethics, technology, and facilities. The structure of the course is predicated on *The Standards for School Leaders* developed by the Interstate School Leaders Licensure Consortium (ISLLC). 3 semester hours

ED 548 SEMINAR IN PUPIL PERSONNEL SERVICES

Required for certification as a supervisor of pupil personnel services, the course explores historical views on pupil personnel services, the disciplines included in pupil personnel services, the

functions of the pupil personnel supervisor, current problems affecting pupil personnel services, and related research. Guest speakers supply first-hand knowledge of challenges faced by school districts in providing essential services in the pupil personnel area. 3 semester hours

ED 549 STORYTELLING

It has been said that “Storytellers are indispensable agents of socialization.” Teachers should be aware of the role the school must play in the socialization process. This course has been designed to provide teachers with the knowledge and practice of storytelling as process, performance, and event. Major topics include socialization as process, functions of story and storytelling, memory development, the storytelling process, resources, storytelling events, and the interdisciplinary application of storytelling. 3 semester hours

ED 550 DIAGNOSTIC AND PRESCRIPTIVE TEACHING

Designed for classroom teachers who must individualize their program in order to meet the needs of children who have learning or physical disabilities. This course provides the student with methods of evaluating learning problems and of remediation techniques that can be used in self-contained classes. The development of individualized educational programs and the implementation of such programs for inclusion are discussed. Prerequisite: ED 507. 3 semester hours

ED 551 INTRODUCTION TO SPECIAL EDUCATION

This course is designed to provide students with a critical overview of special education including its history, the classification and description of exceptionalities, and its legal regulation. Major issues related to identification, assessment, educational and therapeutic interventions, social/psychological aspects, and inclusion are examined. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 552 SPECIALIZED TOPICS IN THE ELEMENTARY CURRICULUM

The course focuses on the role of the teacher and the creation of an environment conducive to learning in the elementary setting. The course content includes basic principles and instructional methods in elementary issues such as classroom management, health, and physical education. Students are expected to demonstrate their ability to plan and implement age appropriate curriculum and classroom strategies. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 553 CURRICULUM, INSTRUCTION, AND ASSESSMENT

This course examines philosophical conceptions of curriculum, basic educational assessment and principles of planning and instruction. Learners develop critical skills necessary to evaluate curricular trends, develop an educational philosophy, and plan for and implement instructional strategies. Additionally, students will become familiar with standardized and teacher-made assessments, their interpretation, and meaningful reporting for their constituents. 3 semester hours

ED 555 CURRENT ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

The purpose of this course is to examine the major issues that are having an impact on public education. A wide range of problems is identified, and proposals for improving the quality of public education are presented. Students have the opportunity in the form of a research project to develop an action plan related to an issue of importance to their educational community. 3 semester hours

ED 561 ANALYSIS, INNOVATION, AND EVALUATION OF EARLY CHILDHOOD CURRICULUM

This course provides early childhood educators an opportunity to explore historical data and emerging research on how children grow, develop, and learn from birth to eight years of age. Programs and curriculum models in early childhood education will be analyzed and evaluated. Students will design developmentally appropriate curricula and incorporate these programs in their current professional activities. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 564 CONTINUING ISSUES IN EARLY CHILDHOOD EDUCATION

This course focuses on the identification and analysis of issues, innovations, trends, and policies of current importance in early childhood education. Topics may include government responsibility in early childhood care and education, the origins and significance of employer-supported child care, and infant/toddler education issues. Questions to be answered are who is responsible for early education, when should early education begin, what should early childhood curriculum contain, and how will early childhood education be evaluated. 3 semester hours

ED 570 MATHEMATICS IN THE ELEMENTARY SCHOOL AND IN EARLY CHILDHOOD

Instructional methods and materials for teaching early childhood and elementary school mathematics are presented. *Principles and Standards for School Mathematics*, a publication of the National Council of Teachers of Mathematics, provides a central focus for this course. Appropriate use of technology in mathematics instruction is emphasized. This course contains a field-work component in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 582 INTRODUCTION TO SEX EDUCATION

Emphasizes three major goals including increased self-awareness, knowledge of appropriate approaches to use in sex education, and improved instructional skills and abilities for teaching sex education. Participants learn several basic methods and strategies appropriate to this area of study and are encouraged to use these approaches. 3 semester hours

ED 583 THE EDUCATION OF ADULTS FROM A DEVELOPMENTAL PERSPECTIVE

Designed to provide students with an introduction to the field of adult education within the context of adult learning and development. The course explores the foundations of adult education with a review of the philosophical concepts and their application to the practice of educating adults. Newly emerging theories of late adolescent and adult development provide a rich and comprehensive perspective on the educational motives and needs of adult students, as lifelong learning and mass education become realities. This course examines the implications of adult development theories for education, with particular attention to the increasing numbers of adult students in our various educational institutions. 3 semester hours

ED 584 PROGRAM DEVELOPMENT IN ADULT EDUCATION

This course explores the basic principles and practices involved in establishing and managing adult education programs. Students examine the design of effective learning experiences for adults in various settings: higher education, adult basic education, corporate training, and community and health education. Topics include program development, concepts of needs assessment, goals and program objectives, faculty/trainer selection

and training, instructional design, ethical issues in design and delivery, and evaluation. Prerequisite: ED 583. 3 semester hours

ED 585 STUDENT TEACHING HEALTH PORTFOLIO

For school nurses who are seeking health education certification, this course may be substituted for student teaching. School nurses complete a minimum of 200 hours of health teaching and related activities over two semesters (3 semester hours per semester) and develop a portfolio under the supervision of a professor from the teacher education program. The professor makes biweekly observations. Prerequisite: Permission of the director of Field Experiences and Certification. 6 semester hours

ED 588 SPECIAL TOPICS

Topics which have special appeal to instructors and students because of their timely quality are periodically offered in the form of newly developed courses. Newly developed courses may be offered in this category prior to their formal approval and assignment of course numbers. 3 semester hours

ED 593 TEACHING SOCIAL STUDIES IN THE PRESCHOOL AND ELEMENTARY SCHOOL

The purpose of this course is to provide students with an understanding of the goals and objectives of elementary social studies education. Through assignments and instruction, students learn a variety of strategies that will enable them to teach effectively in a performance-based learning environment. Curriculum planning, authentic assessment, and cooperative learning are emphasized in the course. This course contains a fieldwork component in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 594 TEACHING SOCIAL STUDIES IN THE SECONDARY SCHOOL

Designed for pre-service and in-service secondary social studies teachers, this course provides students the opportunity to examine the major goals of social studies education. Students develop a variety of teaching strategies that enables them to teach successfully in a performance-based learning environment. Pre- or corequisites: ED 507, 517, or 518 and 511. 3 semester hours

ED 595 CURRENT TRENDS IN SOCIAL STUDIES

Provides students interested in teaching elementary and/or secondary social studies an opportunity to (1) examine the major issues and challenges in the field of social studies, (2) develop and present individual or collective curriculum models appropriate to the current and future needs of their students, and (3) experience through assignments and instruction a variety of strategies and materials that will enable them to teach effectively in a student-centered, performance-based learning environment. 3 semester hours

ED 597 METHODS OF TEACHING GEOGRAPHY

Designed to provide teachers with the content, methods, and instructional materials needed to improve instruction in geography for students in the middle school and high school. 3 semester hours

ED 598 STUDENT TEACHING SEMINAR

The student teaching seminar is taken in conjunction with ED 599, Student Teaching. It includes a sequence of topics that are addressed by full-time faculty, adjunct faculty, and invited school district and state professionals. Topics include lesson planning, diversity, inclusion, PRAXIS examinations, technology, classroom management, interviewing and hiring practices, state-based standards in K–12 education, and professional development. Corequisite: ED 599. 1 semester hour

ED 599 STUDENT TEACHING

During the 14-week student teaching experience, the student observes and teaches under the supervision of a cooperating teacher and a supervisor from the university. The experience requires daylong attendance in the school for the entire semester. In conjunction with this experience, student teachers are required to take ED 598, a weekly seminar. The course is open only to those who have completed all professional courses required for certification. Prerequisite: Passing scores on the Praxis I tests and permission of the director of field experiences and certification. 5 semester hours

ED 601-602 PRACTICUM IN SCHOOL SUPERVISION I & II

Required of candidates for certification as school district supervisors in curriculum and instruction. Students translate current issues of leadership in education into practical and effective solutions in the field. Both courses (360 clock hours of practicum experience) are required for certification. 3 semester hours each

ED 603 PRACTICUM IN SCHOOL NURSING I

This course provides students with the theory and practice of the specialty of school nursing. This course explores the health care and health education services provided by the nurse within a school setting. Students have clinical experiences within a school setting supervised by a certified school nurse. 3 semester hours

ED 604 PRACTICUM IN SCHOOL NURSING II

This course expands upon the theory and clinical experiences begun in ED 603. This course provides content on the school nurse's role in providing health services, as well as the organization and administration of the school health program. Special focus is on planning and implementing programs that promote health among school-aged children and staff employed in schools. The students collaborate with the certified school nurse and other teaching personnel in providing health counseling and formal classroom teaching. Knowledge of state policies and procedures serve to organize clinical experiences. Required for students seeking certification in New Jersey. 3 semester hours

ED 605-606 PRACTICUM IN SCHOOL SOCIAL WORK I & II

Students enrolled in this practicum spend 24 hours, or 3 days per week for one school semester, working in an educational setting. In this practicum course, students are expected to demonstrate appropriate professional commitment and ability to utilize proper skills and techniques appropriate to home and school visitors. Corequisite: ED 516. 3 semester hours each

ED 607-608 INTERN TEACHING

This internship provides a hands-on opportunity to teach in the intern's own classroom under biweekly supervision by experienced university faculty. The course is open only to those interns who have *in hand* the intern certificate issued by the Pennsylvania Department of Education obtained through the director of the Teacher Intern Program and who have been hired by the school or school district. Full-time, day-long attendance at the school where employed is required. In addition, interns are required to attend periodic seminar sessions throughout both semesters, the dates of which will be announced at each semester's beginning. This course *does not* count toward the master of education degree, for the credit can only be used for certification purposes. The position must be sought after and obtained by the intern. A minimum of one year to a maximum of three years of supervision will be required. Prerequisites: Permission of the

program director, an intern certificate, and contractual offer by a school or school district. 3 semester hours each

ED 611 PRACTICUM IN SPECIAL EDUCATION

This course is an intensive fieldwork experience for students who currently hold certification in an area other than special education. During one academic semester, the student will be placed in a special education setting for seven weeks. The student observes and teaches under the supervision of the cooperating teacher and the university supervisor. The experience requires daylong attendance in the school for the seven weeks. This course is open to students who have completed all professional courses required for certification in special education with the exception of ED 667. Prerequisite: Permission of the director of field experiences and certification. 3 semester hours

**ED 612 INSERVICE TEACHING
IN SPECIAL EDUCATION**

This course is for students who are seeking certification in special education and are currently teaching full time in public schools under emergency certificates or are teaching in private schools. The student will be supervised weekly (14 weeks) by a university supervisor. In conjunction with this experience, students will be required to attend a weekly seminar. This course is open only to those who have completed all professional courses required for special education certification. Prerequisite: Permission of the director of field experiences and certification. 6 semester hours

**ED 613-614 PRACTICUM IN PUPIL PERSONNEL
SUPERVISION I & II**

Required of candidates for certification as school district supervisors in pupil personnel. Students translate current issues of pupil personnel leadership in education into practical and effective solutions in the field. Both courses (360 clock hours of practicum experience) are required for certification. 3 semester hours each

**ED 615 PRACTICUM SUBSTANCE AWARENESS
COUNSELOR**

This course is designed for students seeking the student assistance counselor certification. Students are required to perform duties under the supervision of a certified student assistance counselor in a school district. Prerequisites; ED 650, 651, 652, 653, 659. 3 semester hours

ED 616 STUDENT DEVELOPMENT THEORY

This master's level course introduces students to the set of theories that help inform research and practice related to understanding and improving the college student experience, with primary emphasis on the undergraduate student population. The course focuses on the application of theoretical constructs to student affairs practice. 3 semester hours

ED 617 DIVERSITY IN HIGHER EDUCATION

The diversification of American higher education is one of the most promising, and challenging, issues of the modern era. This course integrates theory, research, and practice to explore issues related to diversity across multiple stakeholders and populations in higher education, with particular attention to the intersection of identity in institutional contexts. 3 semester hours

**ED 619 COMPARATIVE AND INTERNATIONAL
HIGHER EDUCATION**

This course explores postsecondary education from a comparative perspective through the study and analysis of national contexts, trends, and models of higher education. Multinational and

regional comparisons and indepth explorations of individual models contribute to students' understanding of comparative and international issues and global higher education. 3 semester hours

ED 620 THE MIDDLE SCHOOL

This course examines the rationale for middle level education. The aim of the course is to sensitize teachers and administrators to the diversity of developmental models related to the young adolescent, and to foster understanding for middle level educational practices. Middle school structure, programs, teaching strategies, and effective discipline of middle level students will also be explored. Special attention is given to the urban middle school and to the students who attend them. 3 semester hours

**ED 621 MODELS FOR TEACHING AND LEARNING
IN THE MIDDLE SCHOOL**

This course explores the unique sociological and psychological aspects of the middle level learner and the implications of these aspects for teachers, counselors, and administrators. Models for teaching and learning at the middle level will be studied for the purpose of developing strategies appropriate to the middle level student. 3 semester hours

**ED 622 READING AND WRITING ACROSS
THE MIDDLE SCHOOL CURRICULUM**

This course analyzes how the theory of reading and writing to learn applies to middle level instruction. Students will investigate the practical applications of reading and writing across the disciplines in the middle school setting and the research that leads to the development of those ideas. Models of exemplary practices will be studied for the purpose of developing strategies appropriate to the middle level student. 3 semester hours

**ED 623 LITERACY INTERVENTION IN THE CONTENT
AREAS FOR LEARNERS WITH DISABILITIES**

This course involves development and implementation of effective curriculum and materials to educate students with special needs in reading, writing, and mathematics. 3 semester hours

ED 624 TEACHING ENGLISH LANGUAGE LEARNERS

This course covers both culture and English language skills in a comprehensive format. It provides students with the theories, as well as practical and effective resources, necessary to meet the educational challenges faced by mainstream classroom teachers of culturally diverse learners of English. Students study current and established theories of culture and language through a variety of formats, including readings, classroom observations, literature reviews, and class discussions. Upon completion of the course, students will have a basic understanding of the theoretical and foundational base of multicultural education and English as a second language, which will better equip them to accommodate diversity in the classroom. 3 semester hours

ED 625 ADMINISTRATION IN HIGHER EDUCATION*

This course focuses on the administration and management of colleges and universities. Students examine the literature and current organization models of higher education that impact administrative practice. Administrative roles and functions associated with trustees, governance, human resources, and organizational models are discussed. 3 semester hours

**ED 626 ORGANIZATION AND GOVERNANCE
IN HIGHER EDUCATION**

This course explores the interrelationship between organizational culture, structure, administrative practice, and governance in American higher education. Students explore the impact of culture and type of institution on decision-making and leadership.

This course focuses on collegial, political, bureaucratic, and other factors that impact various approaches to administration and governance of colleges and universities. 3 semester hours

**ED 627 INSTITUTIONAL EFFECTIVENESS
IN HIGHER EDUCATION**

This course introduces students to strategic planning and assessment practices in American higher education. Increasingly, higher education leaders are asked to provide evidence of strategic, effective, mission-driven initiatives. Further, American colleges and universities are being asked to provide evidence of student learning and organizational and program-specific outcome effectiveness. This course provides an integrated approach to strategic planning, institutional effectiveness, and assessment. 3 semester hours

ED 629 STUDENT AFFAIRS IN HIGHER EDUCATION

This course familiarizes students with the development, philosophy, organization, administration, management, program content, and contemporary issues related to student affairs work in colleges and universities. 3 semester hours

**ED 635 METHODS OF TEACHING
MODERN LANGUAGES**

This course is designed to develop competency in the theoretical foundations and practical applications of second language acquisition. Students will consider current methodologies and approaches to second language instruction, and will examine readings and demonstrations on models of language acquisition, curriculum development, instructional practices, and assessment of testing procedures. Prerequisite or corequisite: ED 507, 517, or 518 and 511. 3 semester hours

ED 640 HISTORY OF HIGHER EDUCATION

This course examines the history of post-secondary education in the United States with a focus on the societal contexts in which colleges and universities have developed. In this course, students focus on societal, economic, political, and cultural forces that have impacted various stages in the development of the American higher education enterprise. A primary course goal is to provide an introductory foundation to key events and timelines in the development of the American higher education system, and to link them with current and emerging issues. 3 semester hours

ED 648 COLLECTIVE BARGAINING

Designed to familiarize a wide variety of school personnel with current case law, strategies, historical trends, and current practices affecting negotiated labor agreements in basic education. 3 semester hours

**ED 649 PUBLIC RELATIONS IN
SCHOOL ADMINISTRATION**

This course offers an in-depth, practical approach to school and school district public relations. Topics include developing and administering a public relations program, working with the media, marketing “products,” and communicating with parents and the community. A hands-on approach will be used for developing press releases, stories, editorials, newsletters, pamphlets, and brochures. 3 semester hours

**ED 650 INTRODUCTION TO
SCHOOL COUNSELING**

This course introduces future elementary, middle, and secondary school counselors to the requisite information and skills needed to successfully work in a school setting. Specifically, the history

of school (guidance) counseling and the recent evolution of the comprehensive guidance program model, curricular planning, consultation, team building, recognition of community resources, referral processes, and accountability practices is presented. The role of the professional school counselor is explored through the American School Counselor Association’s (ASCA) national model. The ethical standards of professional school counseling are reviewed. 3 semester hours

**ED 651 CAREER DEVELOPMENT
ACROSS THE LIFESPAN**

This course introduces future school counselors, as well as students in the higher education/student personnel services program, to the knowledge and skills essential to assisting others with career development and life span issues. The course presents an overview of career counseling theories, assessments, issues, and resources. Principles and theories of career development, occupational and education information, and concepts and principles for effective educational and career planning and development are covered. 3 semester hours

ED 652 GROUP PROCESS AND DYNAMICS

This is a laboratory-oriented course designed to provide students with the knowledge base needed to work and understand group process, and an experience base in group dynamics and process. 3 semester hours

**ED 653 MODELS, THEORIES, AND THE
PRACTICE OF COUNSELING**

This course provides students with the knowledge and skills needed to serve as a counselor, including an exploration of the major counseling models and theories used in service delivery. The exploration of theoretical models is directed toward the development of a personal theoretical model for the practice of counseling by the student. This course also focuses on the acquisition of those counseling skills so vital to clinical practice in this profession. 3 semester hours

ED 655 COUNSELING IN A COLLEGE ENVIRONMENT

This course provides students with the knowledge and skills needed to function as a counselor in a college environment. The treatment of problems of career and educational placement, academic stress, peer relationships, family, and sexual relationships are a part of this course. 3 semester hours

ED 656 THE COLLEGE STUDENT IN AMERICA

This course examines the developmental, cultural, and life issues facing today’s college students. These issues will be explored in relationship to students’ attitudes, values, and characteristics influencing their participation and growth in the higher education community. The changing student population with regard to diverse populations, age ranges, and special needs will also be explored. 3 semester hours

**ED 658 PRACTICUM IN STUDENT AFFAIRS
LEADERSHIP**

This practicum provides students with supervised experiences in counseling and student services practice in higher education. The practicum enables students to develop skills and resources necessary to work professionally in a campus setting. Course requirements include a minimum of 80 hours on site, regularly scheduled meetings with the practicum supervisor, meetings with the course faculty, and a professional portfolio representing the practicum. 3 semester hours

ED 659 FIELD EXPERIENCE AND PRACTICE IN COUNSELING

This course is designed for pre-service elementary and secondary school counselor certification candidates, as well as pre-service community counselors. The role and responsibilities of the elementary and secondary school counselor are explored via a 75-hour field experience. The objective of the field experience is to promote and facilitate the process of becoming a professional, reflective, and competent school or community counselor through a variety of performance tasks in a school or community counseling setting. 3 semester hours

ED 660 INSTRUCTIONAL DESIGN IN SPECIAL EDUCATION

This course covers techniques of instructional design, assessment, and strategies with a focus on exceptional children. In addition to the basic principles of instructional design, the course presents methods for individualizing instruction and assessing student progress. Teaching approaches to planning and implementing instruction are taught, as well as special considerations for children with diverse needs. Prerequisite: ED 551. 3 semester hours

ED 661 EDUCATION OF STUDENTS WITH LEARNING DISABILITIES OR NEUROLOGICAL IMPAIRMENTS

This course provides a historical perspective and a critical overview of definitions, identification procedures, educational strategies, and service delivery options for students with learning disabilities and for those with neurological impairments. Current trends in assessment and educational interventions will be emphasized. This course includes a fieldwork component in a setting for students with learning disabilities. Prerequisite: ED 551. 4 semester hours

ED 662 EDUCATION OF STUDENTS WITH DEVELOPMENTAL DISABILITIES

This course will provide students with an understanding of the theoretical and conceptual issues currently under debate in the field of developmental disabilities. We will examine the identification criteria, instructional strategies, and program development for children with moderate to severe disabilities including mental retardation and autism/pervasive developmental disorder. Objectives will stress adapting environments, materials, and instruction to facilitate inclusion and teaching functional life skills within a special education curriculum. This course includes a fieldwork component in a setting for students with developmental disabilities. Prerequisite: ED 551. 4 semester hours

ED 663 EDUCATION OF STUDENTS WITH EMOTIONAL OR BEHAVIORAL DISABILITIES

This course emphasizes assessment and educational interventions for teaching and remediating the emotional and behavioral disorders of students with and without developmental disabilities. Support services available within the community to families of children with emotional/behavioral disabilities will be examined. This course includes a fieldwork component in a setting for students with emotional/behavioral disabilities. Prerequisite: ED 551. 4 semester hours

ED 664 EDUCATION OF STUDENTS WITH PHYSICAL OR MULTIPLE DISABILITIES

This course provides an overview of the causes, treatment, education, and management of individuals with physical and/or multiple disabilities, including neurological impairments resulting in

physical disabilities, sensory impairments, and the combination of these. This course includes a fieldwork component in a setting for students with physical or multiple disabilities. Prerequisite: ED 551. 3 semester hours

ED 665 YOUNG CHILDREN WITH DISABILITIES: ASSESSMENT AND INTERVENTION

This course provides students with a foundation in assessment and intervention principles and practices with young children with disabilities. It emphasizes developmentally appropriate early intervention practices within the context of family, school, and culture. Students learn collaborative family-focus practices that support the development of children with special needs, ages birth through five years. Interdisciplinary models of assessment and intervention are emphasized. This course contains a fieldwork component in a setting for young children with disabilities. 3 semester hours

ED 666 THE SCHOOL LEADER'S ROLE IN SPECIAL EDUCATION

This course develops special education competencies for school leaders. These competencies include over-representation for diverse students in special education; prevention and early intervention; and effective instructional strategies for students with disabilities in inclusive settings. This course includes rigorous special education supervisory competencies, as well as provides the knowledge, skills, and ability to demonstrate supervising and evaluating these competencies in others. 3 semester hours

ED 667 EFFECTIVE COLLABORATION AND TEAM BUILDING

The purpose of this course is to help students develop an understanding of the major issues involved in working as a member of a team and in helping others understand the perspective of a special education teacher. This course focuses on effective strategies for collaborating with families, regular and special educators, paraprofessionals, and other service providers in the school and community. This course is for advanced special education majors or students who are currently teaching in a special education setting. Corequisites: ED 599, 611, or 612. 3 semester hours

ED 670 INTRODUCTION TO ACQUIRED BRAIN INJURY IN CHILDREN

This course provides students with an understanding of acquired brain injury. It examines etiology, basic brain-behavior relationships, and theories of recovery following traumatic brain injury. A comparison between the unique learning needs of an individual with traumatic brain injury and other special populations is discussed. Cognitive deficits in the areas of attention/concentration, memory, organization, language, processing, problem solving, and executive functioning are thoroughly discussed. Considerable time is devoted to presenting classroom and therapeutic remedial and instructional strategies training. Issues regarding school re-integration, appropriate classification, accommodations, educational placement options, and working within an interdisciplinary team are discussed. The course also provides a working knowledge of both formal and informal screening tools to be administered in the classroom or therapy setting. 3 semester hours

ED 675 THE AMERICAN COMMUNITY COLLEGE

This course provides students with knowledge and understanding regarding the history and evolution of community colleges. Topics include the average American community college mission; students; assessment; resources and financing; developmental, terminal, and transfer education; workforce development

and continuing education; faculty; governance; and leadership. Higher education policy decision impact and future trends are examined. 3 semester hours

ED 677-678 PRACTICUM IN SPECIAL EDUCATION SUPERVISION I & II

Required of candidates for certification as school district and/or intermediate unit supervisors in special education. Students translate current issues of leadership in special education into practical and effective solutions in the field. A log of activities with time records must be maintained and signed by the school-district mentor. A reflective analysis of these experiences is required and is to be organized according to the *Standards for School Leaders*, developed by the Interstate School Leaders Licensure Consortium (ISLLC). Both courses (360 total clock hours of practicum experience, 180 hours each) are required for certification. 3 semester hours each

ED 680 FOUNDATIONS OF HEALTH EDUCATION

An overview of health education and related professions are provided in this course. Areas covered include historical, philosophical, psychological, scientific, and sociological foundations and principles. It also provides an introduction to career opportunities plus overall educational objectives of professional preparation programs. 3 semester hours

ED 681 SUBSTANCE ABUSE EDUCATION

This course provides an overview of the use and abuse of tobacco, alcohol, and other controlled substances. An overview of historical and sociological factors influencing the development of substance abuse is presented. Legal, physiological, and psychological effects of substance abuse on the educational process are examined. Special curriculum topics in substance abuse education are included. 3 semester hours

ED 684 LEGAL ISSUES IN HIGHER EDUCATION

This course provides students with an understanding of the principles of law as related to the problems of administration in higher education. The course covers the study of topics related to contract law, the relationship of personnel policies to litigation, equal opportunity regulations, and laws relating to students in postsecondary education. In addition, the course familiarizes students with the principles of courtroom procedures, testimony, and evidence rules. 3 semester hours

ED 687 CURRENT ISSUES IN HIGHER EDUCATION

This course focuses on the identification and analysis of contemporary issues, innovations, and trends in higher education. Discussion topics may be related to teaching and learning, faculty, changing student profiles, assessment and accountability, technology, emerging models, and global trends. 3 semester hours

ED 691 SERVICE LEARNING AND CIVIC ENGAGEMENT IN HIGHER EDUCATION

This course introduces students to current theory, practices, and trends associated with civic engagement and service learning initiatives in higher education. The course examines how faculty and students approach the design and implementation of student learning in response to community-identified concerns within the context of institutional university or college mission. Students explore the relationships between academic course work, student service-learning, and the development of citizenship skills. The role of federal and state policy, institutional mission and strategic planning, faculty engagement, curriculum, and societal trends are discussed. 3 semester hours

ED 692 CREATIVE AND PRODUCTIVE THINKING

The first part of the course considers the meaning of the concept of thinking and then looks specifically at techniques of critical thinking. These techniques include most of the tools of informal logic such as linguistic logic, conceptual analysis, and the logic of inquiry. Specific emphasis is placed on the recognition of fallacious reasoning and the development of rationally defensible arguments. During the second half of the course, definitions of creativity and a review of the research on creativity are presented. Formal and informal assessment techniques for identifying the creative productive students are discussed. 3 semester hours

ED 693 WOMEN IN HIGHER EDUCATION

This course examines the historical and current trends and issues related to women in higher education. Attention is given to the issues that affect female students, faculty members, staff and administrators, and institutional leaders. The course provides foundational knowledge about relevant research, theory, and practices addressing women in higher education. Students use the literature as a point of entry into their own scholarship about this population of participants in postsecondary education. 3 semester hours

ED 694 ORGANIZATION, SERVICES, AND SKILLS FOR STUDENT PERSONNEL IN HIGHER EDUCATION

This course provides an introduction for graduate students pursuing a master's in student personnel services and counseling in higher education. Topics give an overview of the world of higher education and give students a better understanding of the environment and services offered on college campuses. 3 semester hours

ED 695 INDEPENDENT STUDY IN EDUCATION (MASTERS)

Designed to meet the needs and interests of master's degree students who wish to pursue the study of topics beyond the range of the graduate curriculum. Each student enrolled in an independent study must work under the guidance and supervision of a member of the faculty of the education department. Prior approval by the associate dean of the Division of Education is necessary before a student may enroll in this course. 1 to 3 semester hours

ED 696 CURRICULUM DEVELOPMENT PROJECT

Designed so that students develop a complete and original curriculum on a special topic. This work must be done under the guidance of a member of the faculty, and prior approval is needed by the associate dean of the Division of Education before a student may enroll in this course. 3 semester hours

ED 697 PRACTICUM IN HIGHER EDUCATION LEADERSHIP

Designed to be a faculty-directed research project/thesis. Guidelines for preparing the Capstone Project proposal and for completing the course are available from the student's advisor. 3 semester hours

ED 699 THESIS IN EDUCATION

A thesis is an individually initiated and self-directed experience that involves writing an acceptable proposal, carrying out a research project, and writing a manuscript of professional quality. This option is especially for students who wish to pursue advanced study beyond the master's level. The student may elect to enroll for 3 or 6 credits in any one semester, but if the former option is elected, the student must enroll for another 3 credits in the following semester (summer session included). A maximum of two calendar years is permitted for the completion of the thesis, with an

extension of one year possible by permission of the associate dean of the Division of Education, provided that the student can present evidence of satisfactory progress. When the thesis has been accepted by the Division of Education, a grade of P will be recorded, granting credit for the 3 or 6 semester hours. Prerequisites: 21 semester hours of graduate study, including one graduate course in educational research, and permission of the associate dean of the Division of Education. 3 or 6 semester hours

ED 703 SPECIAL TOPICS IN TESTING

Explores technical, conceptual, and ethical topics in testing that are essential to the test programs of colleges and other institutions, and to long-range planning for program evaluation. Topics investigated include item-response theory; reliability and error; validity and prediction; norms and standardization; test and item-bias; admission, placement, screening, and diagnosis; and the role of tests and instruments in program evaluation. Attention will be paid to modern developments in testing. 3 semester hours

ED 704-705 INTERNSHIP IN ELEMENTARY SCHOOL COUNSELING I & II

This internship is designed for preservice elementary school counselor certification candidates. The role and responsibilities of the elementary school counselor are explored via two 150-hour internship experiences. The internship provides students with the opportunity to develop skills and resources necessary to function in the role of an elementary school counselor. Prerequisites: ED 650, 651, 652, 653, and 659. 3 semester hours each

ED 706-707 INTERNSHIP IN SECONDARY SCHOOL COUNSELING I & II

This practicum provides students with the opportunity to develop skills and resources necessary to function in the role of a secondary school counselor. The practicum is a combined effort of a university supervisor, the supervising counselor on site, and the student. Students will attend a regular seminar conducted on campus. These seminars will focus on cases, professionalism, and problems of communication and interpretation. Replaces ED 702. Prerequisites: ED 650, 651, 652, and 653. 3 semester hours each

ED 709 CURRICULUM IN HIGHER EDUCATION

This course examines curriculum development issues in the context of the purposes and needs of diverse populations of students, available institutional resources, and the politics of higher education. Particular attention is paid to the deliberative structures involved in curricular advocacy and analysis. In addition, it aims at developing analytic skills that tie theory to educational practice. 3 semester hours

ED 712 HISTORY AND PHILOSOPHY OF READING EDUCATION

This course examines theories about the nature of literacy instruction in the context of the history of American education from early times to present. Students will learn the historical and philosophical origins of contemporary theory and practice. Prerequisites: ED 521 and ED 522. 3 semester hours

ED 714 QUALITATIVE RESEARCH METHODS IN EDUCATION

This course is designed to clarify and explain some of the different approaches and methods by which qualitative research in education is being conducted, and to develop a sense of what is meant by the term 'qualitative.' The course is also designed to provoke discussion and further elaboration of the issues and methods that are represented—e.g., ethnography, historiography,

content analysis, conceptual analysis, and grounded theory. 3 semester hours

ED 715 SCHOOL ARCHITECTURE AND PLANT MANAGEMENT

Structured to provide school administrators and other public officials with theory and techniques essential to effective management of schools and public buildings. Leadership requirements are emphasized and applied to: the planning and construction of new buildings; renovations to existing structures; and utilization, operation, and maintenance of facilities. In addition to school administrators, this course is applicable to public officials and leaders of community organizations who become involved with planning, constructing, and maintaining buildings such as churches, libraries, and municipal facilities. 3 semester hours

ED 716-717 INTERNSHIP AND FIELD EXPERIENCE IN COMMUNITY COUNSELING I & II

This internship experience provides students with the opportunity to develop skills and resources necessary to function in the role of a community counselor. The community counseling internship is a combined effort of a university supervisor, supervising counselor/mentor, and the students. Students meet with their supervisors and focus on client cases, professionalism, communication, and interpretation. Prerequisites: ED 651, 652, 653, and 659. 3 semester hours

ED 718 VALUES AND ETHICS IN EDUCATION

This course examines in detail how one justifies ethical choices and the nature of controversy resulting from differences in ethical perspective. It examines the role of education in relating values to behavior, and of personal choice to social choice. It looks at policies that purport to pursue various educational values, the conceptions of justice underlying them, and their relationship to both the mechanisms and actualities of benefit-cost distributions in our society. 3 semester hours

ED 719 PROSEMINAR IN HIGHER EDUCATION

As an interdisciplinary field of study, higher education combines practice, theory, and empirical research within an economic, social, cultural, and political context. This proseminar provides an overall introduction to the academic discipline of higher education, the process of doctoral study and research, and the Widener University program, procedures, and policies. It is required of all accepted students during their first year of study. Students explore the multifaceted aspect of doctoral work, including writing, reflection, critical analysis, research, application, and leadership development. 3 semester hours

ED 723 CORRELATES OF READING

This course focuses on research of perceptual, cognitive, affective, and linguistic processes and the manner in which they interact and influence literacy, word recognition, and comprehension of oral and written language. Students will critique research, identify trends, use findings to gain more in-depth knowledge of the reading process, and make implications for reading instruction, diagnosis, and remediation. Prerequisites: ED 521, 522, 535, and 726. 3 semester hours

ED 724 WORD IDENTIFICATION AND VOCABULARY DEVELOPMENT

This course examines word identification processes that readers and writers need to become independent learners. The development of vocabulary and its relationship to concept development is explored. Relevant theories, research, and instructional approaches are discussed. Prerequisites: ED 521 and 522. 3 semester hours

ED 725 COMPREHENSION: THEORIES AND PRACTICE

This course provides an advanced study of theories of learning and comprehension. Students examine the process of comprehension, factors that influence that process, and the role of educators in promoting comprehension. Prerequisites: ED 507 or equivalent, 521, and 522. 3 semester hours

ED 726 DEVELOPMENTAL PSYCHOLINGUISTICS

The scope of the course includes theories of language development and their practical applications to the practice of teaching. Theoretical traditions are contrasted. Emphasis is placed on recent developments in the study of language—i.e., semantic acquisition, natural language theories, pragmatics, bidialectalism and bilingualism, mother-child interaction, discourse analysis, and conversational implicature. A methodological study of language is a requirement of the course. Prerequisite: ED 507. 3 semester hours

**ED 727 ASSESSMENT OF
INTELLECTUAL FUNCTIONING**

This course explores the history of intelligence testing and its current use in educational settings. Special emphasis is placed on the interpretation of Wechsler Intelligence Scale for Children—III (WISC—III) profiles for use by counselors, reading specialists, and special educators. Prerequisite: ED 503. 3 semester hours

**ED 728 READING/LEARNING DISABILITIES:
DIAGNOSIS AND TREATMENT**

This course will focus on the clinical procedures associated with the diagnosis and treatment of reading and learning disabilities. Included in the course will be a historical investigation of reading/learning disabilities. Prerequisites: ED 521, 522, 535, and 536. 3 semester hours

**ED 730 WRITING FOR ACADEMIC
RESEARCH PURPOSES**

The writing done in graduate courses, culminating in dissertations, presents unique and specific challenges. This course explores the richness and variety of writing done within graduate courses, making connections to the writer's past experiences and focusing on the new rhetorical tasks required by various kinds of academic discourse. Topics include genres of academic discourse, such as summary, critique, analysis, literature review, comprehensive examination essay, proposal, and dissertation; use and documentation of sources; plagiarism; rhetorical tasks; structure and organization; and style. Besides discussing these topics and analyzing models, students serve as peer readers and confer individually with the instructor as they evaluate and revise their work. 3 semester hours

ED 734 LEADERSHIP IN HIGHER EDUCATION

This course provides an overview of leadership theories and explores their historical and current applications to the field of higher education. Traditional institutional leadership roles such as those of the president, provost, and dean are explored. In addition, students apply leadership theories to their own development and identities as leaders and contribute to research and practice related to the application of leadership to higher education administration. 3 semester hours

ED 736 ASSESSMENT OF STUDENT LEARNING

This course provides students with an overview of internal and external forces impacting trends and practice associated with the assessment of student learning. Students examine national, state, regional, and professional contexts of assessment. The course explores research, assessment models, literature, and best practices,

which can inform various approaches to assessing student learning. 3 semester hours

**ED 740 PROFESSIONAL DEVELOPMENT
IN LITERACY EDUCATION**

This course is designed for those who are or will be responsible for teacher or administrator professional development related to literacy. Using an adult learning perspective, the course presents information on developing and delivering staff development initiatives. Strategies for establishing successful literacy programs, monitoring initiated programs, and evaluating teachers' professional development needs, and critiquing others' professional development plans is a focus of the course. Students gain a thorough foundation for professional development in literacy education from current literature, research, and practical applications. 3 semester hours

**ED 744 FACULTY PROFESSIONAL DEVELOPMENT
IN HIGHER EDUCATION**

This course is designed for those who are or will be responsible for teacher/faculty in-service, staff, and professional development in schools, colleges, and other educational settings. Using an adult-learning perspective, the course presents information on developing, managing, and delivering in-service and staff development initiatives. Practical strategies for motivating teachers and faculty, establishing successful programs, and evaluating in-service needs will be presented. Students will critique professional development programs, develop such initiatives for their educational settings, and gain a thorough foundation from literature, research, and practice. The course offers practical steps to being an effective leader in the arena of professional development. 3 semester hours

**ED 745 LEADERSHIP, COMMUNICATION,
AND DECISION MAKING**

The purpose of this course is to provide students an opportunity to examine areas in which educational practitioners must be most proficient: leadership, communication, and decision making. Through individual reflection and group process, students will study the theoretical foundations and practical implications of leadership in an era of transformation. Each student is responsible for analyzing an educational organization and developing a leadership action plan to bring about positive change in that organization. 3 semester hours

**ED 746 FINANCIAL MANAGEMENT CONCEPTS
FOR SCHOOL ADMINISTRATORS**

This course examines resource allocation, including ways of setting financial priorities, selecting appropriate budget strategies, and determining the needs of the school for personnel, administrative and supportive staff, and school plant. The course also investigates methods for evaluating the effectiveness of resource allocation in achieving institutional goals and meeting academic needs, not only at the school level but also at the level of individual programs. Students are responsible for the completion of model budget projects in which they apply accounting concepts and selected accounting procedures to solve problems related to revenue management under several resource scenarios. 3 semester hours

**ED 747 PERSONNEL MANAGEMENT
FOR SCHOOL ADMINISTRATORS**

An examination of policies and procedures concerning personnel management, this course explores the major organizational tasks of personnel management, including planning, recruitment, selection, placement and induction, staff development, appraisal, compensation, and collective bargaining. Special emphasis is

given to such personnel issues as affirmative action, equal employment opportunity, employment termination, and the tenuring process. 3 semester hours

ED 750 ORGANIZATION AND ADMINISTRATION OF K-12 SCHOOLS

This course prepares graduate students for positions as principals, supervisors, and administrators. Organizational and leadership models are emphasized. The many duties, responsibilities, functions, and activities of the modern day principal are studied. The principal as the instructional leader of the school's learning community is analyzed. The changing role of the principal driven by high stakes testing and academic standards is critiqued. Other topics include personnel and labor relations, teacher observation and evaluation, budgeting, central office relations, community and parent relations, facilities and grounds, and strategic planning within the context of the school. This course is organized around the six *Standards for School Leaders*, developed by the Interstate Consortium on School Leadership. Course content is applicable to certification. 3 semester hours

ED 755 PHILOSOPHICAL INQUIRY IN HIGHER EDUCATION

An examination of organizational and educational problems from the perspective of philosophical inquiry. Initially, the course evaluates major epistemological systems; then it explores the practical uses of inquiry in contemporary problem solving. Concerns of higher education arising from such diverse fields as ethics, moral philosophy, and moral action—as well as dialectics and change—are introduced throughout the course as the content that must be subjected to disciplined philosophical analysis. 3 semester hours

ED 777 ASSESSMENT OF SCHOOLS AND SCHOOL PROGRAMS

In this course, students explore past and current practices used to monitor individual and group progress toward standards of knowledge and performance, assess achievement, report and explain assessment outcomes to the community and various school district stakeholders, interpret indicators and ratings of school performance, use assessment outcomes as incentives for improved performance, build school and individual capacity, and deliver sanctions for persistent success and failure. 3 semester hours

ED 788 SPECIAL TOPICS

Topics that have special appeal to instructors and students because of their timely quality and the particular qualifications of the instructor are periodically offered. Newly developed doctoral level courses may be offered in this category prior to their formal approval and assignment of course numbers. 3 semester hours

ED 790 SCHOOL REFORM

An overview of the history of school reform initiatives will precede a careful examination of present day efforts to change school goals and processes (e.g., America 2000 or former President Clinton's 10-Point Plan). Proposals for change will be critically analyzed in terms of their proponents' motivations, the coalitions of interest they purport to serve, the benefits they allege to provide, and the costs they have on various segments of society. To what extent can the school be an instrument of social stability, change, or reconstruction? Who are the stakeholders and the power holders in public education? 3 semester hours

ED 791 ANALYZING EDUCATIONAL CONTROVERSY

A variety of topical controversial issues in education will be

examined to determine whether the apparent controversies are based on real conflicts; whether the underlying disputes can be reconciled or lead to impasse; and to what extent issues of understanding, fact, and value hinder reconciliation. A systematic technique for the analysis of controversy will be taught and practiced throughout the course. The course will focus on such issues as sloganeering, identifying authority, and the definition and operationalization of controversial educational claims, as well as value conflicts and the techniques of constructing compromise positions. 3 semester hours

ED 792 IMPROVING THE TEACHING/LEARNING ENVIRONMENT

Students will study academic theories, studies, and models that promote school and teacher improvement. Four major themes will be explored: commitment to education, school reform, creating change, and personal and organizational excellence. Through lecture, discussion, video, and experiential learning, students will develop a knowledge base about effective schools and teaching that will enhance their skill as educational leaders. 3 semester hours

ED 793 IMPROVING THE TEACHING AND LEARNING ENVIRONMENT IN HIGHER EDUCATION

Students will study academic theories, research, and models that promote teaching and learning effectiveness in higher education classrooms. This course serves as a foundation for understanding the various dimensions of learning in a college setting, and as a practical perspective on learning theories, teaching methods, evaluation, and curriculum planning. In addition, the value of teaching, the role of the professorate, academic ethics, and the reflective practice in teaching will also be covered. 3 semester hours

ED 801/802 INTERNSHIP IN SCHOOL SUPERINTENDENCY

This course is required of all candidates for the assistant superintendent and superintendent letter of eligibility certifications. The course provides field and internship experience as required by the Pennsylvania Department of Education and other states for certification as an assistant superintendent or superintendent. The student and university supervisor, who must have experience as a superintendent, in consultation with the appropriate school or school district administrator(s), design an individualized action plan that will provide the student with the opportunity to gain the experience, knowledge, and skill competencies required. A detailed record of experiences, projects, and activities is maintained by the student. Expectations by the state department of education and Educational Leadership Constituent Council of the NCACTE provide the core concepts for this experience. Monitoring evaluation of the student's accomplishments and achievements in the practicum is done jointly by the university supervisor and school district-based personnel. 3 semester hours for each course yielding a total of 6 semester hours

ED 803 STANDARDS-BASED ASSESSMENT

In this course, students examine the various models currently being used in statewide and local assessments. This includes a critical review of assessment policy and procedures, as well as score interpretation and the data dissemination approaches now being employed. Measurement theory and statistical analysis are applied in these critical reviews. Classic topics covered include those of fairness vs. predictive bias, reliability, standard error, and validity. Finally, the course addresses the special problems of alternative and "authentic" assessment in this context. A case study approach is also used as one technique in this analytical effort. Prerequisites: ED 503 and 510. 3 semester hours

ED 805 CURRICULUM ISSUES IN K-12 EDUCATION

This course provides students with an opportunity to examine a variety of curriculum issues facing educational leaders. Through individual reflection and group process, students will study the theoretical foundations and practical implications of curriculum leadership. Students will be responsible for analyzing curriculum and instruction in their own school communities and developing a professional leadership action plan to bring about positive change in areas related to curriculum development, delivery, and assessment. 3 semester hours

ED 810-811 PRACTICUM IN SCHOOL ADMINISTRATION I & II

This course is required of all candidates for Principal Certification. It is designed to provide for field experience as required for certification. The student and supervisor, in consultation with the appropriate school or school district administrator, design an individualized action plan that provides the student with the opportunity to gain the experience, knowledge, and skill competencies required. Monitoring evaluation of the student's accomplishments and achievements in the practicum is done jointly by the university supervisor and school district-based personnel. 3 semester hours each

ED 820 POLICY DEVELOPMENT IN EDUCATION

Policy theory is examined in the special context of its application to educational institutions. Various models of policy are analyzed with an eye to their being effective, efficient, and moral. To be investigated are methods for judging the persuasiveness and utility of policy proposals. Cross-cultural and historical issues will be considered. 3 semester hours

ED 822 PERSONNEL MANAGEMENT IN HIGHER EDUCATION

This course provides an overview of the concepts in personnel management in general and specifically how they fit into the organizational framework of institutions of higher education. Both the formal and informal function of managing personnel are examined. Current topics in the field are investigated, such as leadership styles, interpersonal communication, staff development and training, diversity in the workforce, conflict management, and ethical issues. Students have opportunities to explore their own management styles, as well as the organizational culture of their institutions. 3 semester hours

ED 823 ETHNOGRAPHIC STUDY OF LANGUAGE

This course will investigate socially adaptive language and communication strategies in their natural contexts for use. The theoretical component of the course will explore conceptual models for describing and understanding language development, communicative competence, and relationships between schooling and language. Prerequisite: ED 726. 3 semester hours

ED 824 SEMINAR IN THE PSYCHOLOGY OF LANGUAGE

This course provides an in-depth examination of current topics in the psychology of language, particularly as they relate to reading. There is an emphasis on theory and the development of research grounded in theory. Prerequisites: ED 710, 726, or permission of the instructor. 3 semester hours

ED 827 READING RESEARCH: PAST, PRESENT, AND FUTURE

This course will examine, compare, and critique topics, methodologies, and conclusions from representative studies in the field of reading since the beginning of reading research in the late

1800's. Trends will be noted and likely future topics, trends, and methodologies will be discussed. Prerequisites: ED 510, 521, and 522. 3 semester hours

ED 840 PRACTICUM IN ADVANCED CLINICAL EXPERIENCE IN CLINICAL DIAGNOSIS

This course is designed for those doctoral students who are in the reading diagnostician track. Students are supervised at various educational settings. Conferences are held with the supervisor at regular intervals to discuss the different projects and field assignments and how these assignments fulfill standards in the field. Students are expected to complete case studies and observe clinical situations. They are also expected to translate current issues of diagnostic practice into effective solutions in the field. 3 semester hours

ED 841 PRACTICUM IN ADVANCED CLINICAL EXPERIENCE IN READING/LANGUAGE ARTS SUPERVISION

This course is designed for those doctoral students who are in the reading leadership track. Students are supervised at various educational settings. Conferences are held with the supervisor at regular intervals to discuss the different projects and field assignments and indicate how their projects fulfill standards in the field. Students are expected to translate current issues of reading leadership in education into practical and effective solutions in the field. 3 semester hours

ED 845-846 SPECIAL TOPICS FOR SCHOOL ADMINISTRATION I & II

Open to all matriculated students in school administration programs. Required of all candidates for the Letter of Eligibility. The course is designed to provide students with in-depth exposure to the problems confronting educational leaders in contemporary educational settings. Political, social, and cultural influences on decision making and the decision-making skills required to achieve a synthesis between policy and pragmatic requirements of administration are the substance of seminar discussion. Guest lecturers from selected school districts are invited to supply the first-hand knowledge of administrative challenges confronted by leaders in school administration. May not be substituted for the Practicum (ED 810) in School Administration. ED 845 is a prerequisite for ED 846. 3 semester hours each

ED 850 ADVANCED QUANTITATIVE RESEARCH METHODS I

This course begins with the fundamental steps in the educational research process, including developing research questions and conducting literature review. It also provides an overview of basic research concepts, including sample and sampling approaches, validity and reliability of measurement results, and types of quantitative research designs. ED 850 mainly focuses on non-experimental designs and survey research, as well as commonly used statistical methods for studies that utilize these designs. The course provides opportunities for students to learn statistical software such as SPSS. Prerequisite: 510. 3 semester hours

ED 851 ADVANCED QUANTITATIVE RESEARCH METHODS II

This course is the continuation of ED 850. The class begins with a discussion of legal matters and ethics in research. The focus of the course is research methods and statistics that are used for group comparisons. Experimental studies along with causal-comparative studies are the research designs to be investigated. Statistics covered in this course are mainly parametric inferential statistics used for analysis of group comparison studies. This

course also covers internal/external validity of research findings and control techniques of extraneous variables. The course provides opportunities for students to learn statistical software such as SPSS. Prerequisite: 850. 3 semester hours

ED 855 CURRENT ISSUES IN PUPIL SERVICES

The purpose of this course is to provide students with basic information, traditional theories, and controversial issues in the field of pupil personnel as related to educational leadership. Students will study the changing societal conditions requiring these pupil services and the reasons for their integration. Using research findings in conjunction with contemporary issues and cases, students will further develop problem solving and decision-making skills required for leadership in the field of pupil services. Each student will design a pupil services division or department for his or her district with a philosophical preamble, supporting research, school board policy statement, mission statement, identified functions, necessary job descriptions, an organizational chart, and other elements of the student's choosing. Pre- or corequisites: ED 547 and 548. 3 semester hours

ED 890 RESOURCE DEVELOPMENT AND FINANCE IN HIGHER EDUCATION

This course explores issues of resource development and funding for higher education organizations and programs. The course focuses on roles played by various public and private funding entities, as well as traditional tuition support models. Students examine the link between intuitional mission and revenue-driven initiatives and programs. 3 semester hours

ED 891 HIGHER EDUCATION FINANCE

Reviews budgeting models appropriate to diverse programs in higher education today. This exploration focuses upon accounting methods and corresponding financial management strategies, which reflect methods of capital formation, risk management, resource allocation, revenue sources and capital structures, fiscal planning, and the impact of governmental fiscal policies. 3 semester hours

ED 892 TECHNOLOGY IN HIGHER EDUCATION

In this course, students will explore the impact of technology on higher education, including use of computers and other technology in the educational process; technological development in educational media, library, and other services; policy considerations and issues related to the deployment of enterprise software on college/university campuses. Current problems, anticipated trends, and specific issues will be addressed from the perspective of the various stakeholders within the educational system: faculty, students, administrators, and public and governmental agencies. 3 semester hours

ED 893 SCHOLAR PRACTITIONER LEADERSHIP PROJECT

This course is for students in the higher education doctoral program and is designed to provide experience in a higher education setting. The faculty member and the volunteer supervisor design an individualized experience that provides each student with an opportunity to gain experience, knowledge, and skills that are not easily conveyed in the classroom. Course requirements include regular meetings with the course instructor and a final paper summarizing the experience. 3 semester hours

ED 895 INDEPENDENT STUDY IN EDUCATION (DOCTORAL)

Designed to meet the needs and interests of doctoral degree students who wish to pursue the study of topics beyond the range of

the doctoral curriculum. Each student enrolled in an independent study must work under the guidance and supervision of a member of the faculty of the education department. Prior approval from the associate dean of the Division of Education is necessary before a student may enroll in this course. 1–3 semester hours

ED 896 CURRICULUM DEVELOPMENT PROJECT

This course is designed to meet the needs and interests of doctoral degree students who wish to develop a complete and original postsecondary curriculum on a special topic. This work must be done under the guidance and supervision of a member of the faculty of the education department. Prior approval from the associate dean of the Division of Education and the student's advisor is necessary before a student may enroll in this course. 3 semester hours

ED 901-902 DISSERTATION SEMINAR I & II

Students meet on a regular basis with their faculty advisors to develop appropriate research strategies, review ongoing research ideas, and develop a formal proposal for the doctoral dissertation. Students enroll in this course for two consecutive academic semesters after they complete all course work and pass the comprehensive examination. 3 semester hours each

ED 903 DISSERTATION SEMINAR III

Students who have not successfully defended the dissertation proposal at the end of ED 902 will maintain continuous enrollment in ED 903 until their dissertation proposal has been accepted following a formal defense. 3 semester hours

ED 999 DISSERTATION RESEARCH

Students are continuously enrolled in dissertation credits for a minimum of 12 semester hours. During this time, they complete their dissertations. Minimum of 12 semester hours

ED 5100 INTRODUCTION TO TEACHING

In this course, students explore the role of the classroom teacher as a facilitator of learning and as a member of the educational community. This course provides an overview of the field of education from a practical perspective. The course introduces the professional responsibilities common to teachers of all grade levels, such as writing lesson plans, planning units of instruction, managing classroom behavior, integrating technology into the classroom, and working with students from diverse ethnic and socio-cultural backgrounds. This course is required for all graduate students who are planning to enter the field of education and do not have an undergraduate background in education. The course should be taken during the students' first semester. This course contains a fieldwork component in a classroom setting. Prerequisite: All students must have required clearances before the semester begins. Please contact the Office of Field Experience for more information. 1 semester hour

ED 5150 EARLY CHILDHOOD DEVELOPMENT: PRENATAL, BIRTH, PRE-K-4

In this course, students use typical developmental milestones in an effort to understand and evaluate atypical development. Students become acquainted with the prenatal and early developmental genetic and environmental influences that contribute to atypical developmental outcomes, the methods of assessment and instruction used by early intervention providers, and the legal and practical practices associated with these methods. The course focuses on how candidates use their understanding and knowledge about the complex characteristics of children's families and communities to create and sustain respectful, reciprocal relationships that support and engage families, and to involve families in their children's

development and learning. An understanding of family values, community supports, evidence-based practice, and functional behavioral assessments are used to show how educators must include a view of the whole child when designing appropriate and effective instruction. This course contains a field experience component in the community. (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines, 2008.*) 3 semester hours

ED 5200 FOUNDATIONS OF EARLY CHILDHOOD

This course provides early childhood educators an opportunity to explore historical data and emerging research on how children grow, develop, and learn from birth through grade four. Programs and curriculum models in early childhood education are analyzed and evaluated. The focus is on the development of the social child and the implications of this development for learning. Academic achievement is founded on emotional and social skills, and learning is a process that requires self-regulation, self-awareness, confidence, motivation, and problem-solving skills. Teacher candidates learn to integrate the development of social and personal skills, including getting along with others (parents, teachers, and peers), following directions, identifying and regulating one's emotions and behavior, thinking of appropriate solutions to conflicts, persisting on task, engaging in social conversation and cooperative play, correctly interpreting others' behaviors and emotions, and feeling good about self and others. The course centers on motor development, health, safety, and nutrition of the young child. The course also focuses on classroom organization and the establishment of an environment conducive to learning. The course celebrates diversity, motivating candidates to learn and foster partnerships with parents, schools, and community. This course is designed to prepare teachers to teach health, safety, nutrition, and physical education activities in the curriculum. This course includes a community outreach project field placement component for which students will plan, present, and evaluate developmentally appropriate lessons for young children. (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines, 2008.*) 3 semester hours

ED 5300 EARLY LITERACY FOUNDATION & ASSESSMENT

The core curriculum for reading education should equip teachers to produce readers who are successful in the classroom and on standardized tests and use reading effectively to negotiate the world. This course enables new teachers to understand and use effective instructional strategies. Coursework, field experiences, skills in assessment, and skills in developing intervention strategies are organized coherently to address the development of strong reading skills and habits. The course and related experiences also include direct and specific linkages to content in mathematics, the sciences, and social science so that candidates acquire and demonstrate knowledge and skills for nonfiction literacy instruction, assessment, and interventions. (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines, 2008.*) 3 semester hours

ED 5400 SOCIAL STUDIES METHODS

This course helps preservice teachers to develop self reflection in the teaching/learning process, foster content knowledge of the social sciences, enhance skills related to learning theories, and create authentic and appropriate assessments. The goals of this course reflect the standards of the National Council for Social Studies' National Standards for Social Studies Teachers (2000) "to ensure that (1) social studies teachers possess the knowledge,

capabilities, and dispositions associated with the central concepts, tools of inquiry, and structures of the disciplines that make up the social studies, and (2) that they are able to create learning experiences that make these aspects of the subject matter meaningful for learners" (p. 17). (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines, 2008.*) 3 semester hours

ED 5410 SCIENCE METHODS

As a result of this course, candidates will demonstrate their understanding of learning as a process that integrates all areas of development. Teachers encounter a wide range of students—those beginning school with previous exposure to high quality science experiences, those with learning challenges, and those whose innate curiosity about the world around them has yet to be tapped by effective science instruction. As a result, candidates learn to utilize a variety of instructional strategies. Candidates learn how to think like scientists and to help their students develop the same set of age-appropriate knowledge and skills. To this end, the course uses an inquiry-based perspective for teaching science. Science process skills are practiced and studied as a means of introducing students to science investigation. Teacher candidates explore the application of alternative learning theories to develop early childhood and elementary level hands-on, minds-on science unit plans. As part of this course, students participate in field experiences to apply these units. All students must have required clearances on file in the Office of Field Experiences and Certification. (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines, 2008.*) 3 semester hours

ED 5420 EARLY AND PRIMARY MATH FOUNDATIONS & ASSESSMENT

This course prepares new early childhood teachers to effectively teach mathematics to pre-K-4 students. *Early Childhood Mathematics: Promoting Good Beginnings*—a joint position statement of the National Association for the Education of Young Children (NAEYC) and the National Council for Teachers of Mathematics (NCTM)—and NCTM's Curriculum Focal Points provide a central focus for this course. Topics include how young children learn mathematics; teaching strategies, techniques, and learning activities related to specific mathematical topics; use of technology, and assessment of mathematics learning. The Pennsylvania Department of Education (PDE) competencies covered in this course include those listed for number and operation, algebra, geometry, measurement, and data analysis and probability. As part of this course, students participate in field experiences that enable them to relate the course content to teaching. (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines, 2008.*) 3 semester hours

ED 5500 INTRODUCTION TO SPECIAL EDUCATION

The course is designed to provide students with a critical overview of special education, including its history, the classification and description of exceptionalities, and its legal regulation. Major issues related to identification, assessment, educational and therapeutic interventions, social and psychological aspects, and inclusion are examined. 3 semester hours

ED 5600 LITERACY INSTRUCTION AND INTERVENTION FOR LEARNERS WITH DIVERSE NEEDS

This course focuses on the development and implementation of evidence-based methods, instructional strategies, materials, and assessments necessary to educate students with diverse needs in reading and writing. Coursework and field experiences prepare

teachers to utilize universal design for learning (UDL) to design and implement instruction. Teacher candidates develop the ability to apply explicit and systematic instruction, adapt content area material to the student's instructional level, utilize assessment tools with appropriate accommodations to identify effectiveness of the standards-based curriculum and use effective instructional and assessment strategies with a wide range of differently abled learners, including students who are English language learners (ELL). (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines*, 2008.) 3 semester hours

ED 5900 STUDENT TEACHING, PRE-K-4

Student teachers observe and teach in classroom situations. The classroom experience is a period of fourteen weeks and is under the supervision of a professor from the teacher education program and also experienced teachers from local cooperating schools. The student teaching experience requires full-time presence in the school for one semester. All students must have required clearances before the semester begins. Please contact the Office of Field Experience and Certification for more information. Prerequisite: Permission of the director of field experience and certification. 12 semester hours

ED 6600 COLLABORATION AND INCLUSION

This course helps teachers develop an understanding of the major issues involved in working as a member of a team and in helping others from special education and multiple teaching positions in general. This course focuses on effective strategies for facilitating inclusion of students with special needs in the general education classroom, and collaboration with families, general and special educators, paraprofessionals, and related service providers in the school and community. A multidisciplinary approach to assessment and intervention is emphasized. (Adapted from the *Pennsylvania Dept. of Education's Pre-K-4 Program Specific Guidelines*, 2008.) 3 semester hours

HUMAN SEXUALITY EDUCATION

HSED 501 SEXUALITY AND SOCIETY IN CROSS-CULTURAL PERSPECTIVE

This course provides an anthropological approach to the norms and mores sanctioning and regulating human sexuality. It focuses on the extent to which sexual practices and beliefs are culturally determined and related to key symbols and key relationships that structure society. Sex and gender throughout the life cycle in a variety of traditional and complex societies are considered. 3 semester hours

HSED 592 CONCEPTS IN HUMAN SEXUALITY

An overview of the concepts from current research in human sexuality. Students identify their own values, identify those of others, and become at ease discussing the many different topics of sexuality. This course is a prerequisite for all courses taken in the human sexuality program; students must have permission from the instructor to enroll in this course. 3 semester hours

HSED 593 BEHAVIORAL FOUNDATIONS IN HUMAN SEXUALITY

An examination of human sexual behavior, including identity, roles, orientation, lifestyles, love, and relationships. Included are problems that can affect sexual behavior. Pre- or corequisite: HSED 592. 3 semester hours

HSED 625 HUMAN SEXUALITY FOR THE EDUCATION & COUNSELING PROFESSIONAL I

Preparation for human sexuality education and counseling in schools, agencies, and community. Focus is on the role of the educator/counselor in planning, implementing, and evaluating sexuality content for a variety of circumstances and groups. Pre- or corequisite: HSED 593. 3 semester hours

HSED 627 FOUNDATIONS OF CLINICAL SEXOLOGY

This course provides a foundational understanding of clinical sexology. Clinical sexology is presented in the context of the joint understanding of the World Health Organization (WHO), Pan American Health Organization (PAHO), World Association of Sexual Health (WASH), and American Association of Sexuality Educators, Counselors, and Therapists (AASECT). Students examine clinical sexology as a specialty of the mental health discipline. 3 semester hours

HSED 643 THEORIES OF DEVELOPMENT AND EDUCATION IN HUMAN SEXUALITY

This course provides an overview of human development, sexual development, learning, and education theories. Content and assignments explore the intersections of these frameworks and theories. 3 semester hours

HSED 644 BIOLOGICAL FOUNDATIONS OF HUMAN SEXUALITY

This course is an examination of the human reproductive system, including fertility control, pregnancy, prenatal development, and birth. Included will be adult sexual functioning, the response cycle, and problems that can affect the system. Prerequisite: HSED 593. 3 semester hours

HSED 719 SENSITIVE ISSUES IN CLINICAL SEXOLOGY

Building on the foundational work completed in earlier courses, this course examines clinical responses to sensitive issues in sexual practice. Professional insight, experience, and research highlight that the psychotherapeutic relationship is the most significant factor of change. In addition, clients' value systems adjust to that of their therapists during treatment and remain so after termination. As a result, this course emphasizes countertransference dynamics and their effects on the psychotherapeutic relationship. Content areas may include abortion, bisexuality, HIV infection, homophobia, pedophilia, pornography, sexual assault, sexual harassment, sexual pleasure, and power. Prerequisites: HSED 625 and 627. 3 semester hours

INSTRUCTIONAL TECHNOLOGY EDUCATION

TED 502 SOFTWARE APPLICATION AND INTEGRATION

This course is designed to help educators understand how to use a variety of computer software applications to create an effective learning environment. Emphasis is on selection criteria for software, software evaluation, classification of software, and software to assist diverse learners. 3 semester hours

TED 503 COMPUTERS AND TECHNOLOGY FOR EDUCATORS

This course helps educators explore how to use present and emerging technologies in their classrooms. The course emphasizes computer skills development, computers as aids in record keeping, educational computer applications, and other technologies available for teaching and learning. Topics include course

material preparation, computer-driven presentations, multimedia, the internet, online searching, and guidelines for software and technology evaluation. No prior experience with computers is necessary. Pre- or corequisites: ED 507, 517, or 518 and 511. *3 semester hours*

TED 504 TECHNOLOGY AND LEADERSHIP

In this course, administrators and technology leaders explore how to plan for technology in their schools. The course emphasizes administrative uses of technology, long-term technology planning, assessing staff technology needs and skills, and technology staff development planning. Topics include equity, technology in administration and instruction, and planning for technology. *3 semester hours*

TED 505 HARDWARE/SOFTWARE SYSTEMS

This course assists educators in designing, developing, and implementing the technology needs of an educational institute. Students develop an understanding of the hardware and software systems' needs, as well as budgets and implementation concerns. *3 semester hours*

TED 521 THE INTERNET FOR EDUCATORS

This course introduces students to the uses of the internet in an educational setting. Core to this course is web page development. Students explore the internet, construct internet activities, and discuss legal and ethical issues as they apply to the internet's use in education. *3 semester hours*

TED 530 INSTRUCTIONAL DESIGN AND INTEGRATION

Students examine current and new theoretical models of design and develop and evaluate instructional technology materials and software. Students also design instructional frameworks that infuse technology and select the appropriate software for that design. *3 semester hours*

TED 531 HYPERMEDIA DEVELOPMENT AND APPLICATION

Students examine educational applications of hypermedia tools. This hands-on course covers all aspects of multimedia construction and design in three phases using three different authoring programs. Students learn how to incorporate digitized media (sound, photographs, and motion clips) into hypermedia. Educational implications and current research are discussed. Prerequisite: TED 530. *3 semester hours*

TED 532 MEDIA DESIGN AND INTEGRATION

In this course, students explore all aspects of analog and digital media. Students develop a foundation in basic media production, including scanning, photo enhancements and design, video capture and editing, and storyboarding and project planning. Prerequisite: TED 531. *3 semester hours*

TED 533 ASSISTIVE TECHNOLOGY

In this introductory course, students explore the use of assistive technologies in a classroom environment. The course focuses on the various applications, activities, and hardware devices used for special needs students. *3 semester hours*

TED 534 ASSISTIVE TECHNOLOGIES FOR INDIVIDUALS WITH COMMUNICATION DISORDERS

This course offers assistive technologies in augmentative and alternative communications for people with severe communication problems in speech or language. The focus is on technologies to support self-determination, learning, social skills, and general communication. *3 semester hours*

TED 535 ASSISTIVE TECHNOLOGIES FOR INDIVIDUALS WITH SENSORY IMPAIRMENTS

This course offers assistive technology assistance for individuals with hearing, visual, and tactile sensory difficulties. The course material addresses cultural perspectives, technologies, and resources. Tools to aid mobility training, learning and cognition, and social integration are emphasized. *3 semester hours*

TED 536 ASSISTIVE TECHNOLOGY ASSESSMENT FOR SPECIAL EDUCATION

This course offers instruction on selecting, administering, and interpreting educational assessment tools, including Response to Instruction and Intervention (RtII), Individualized Education Plans (IEP), and Functional Behavior Assessment (FBA). *3 semester hours*

TED 540 INTERNSHIP IN INSTRUCTIONAL TECHNOLOGY

This course gives the candidate seeking an Instructional Technology Specialist Certificate a minimum of 75 hours of field experience in an educational setting. The student and supervisor, in consultation with the selected school, design an implementation plan for the candidate. Monitoring and evaluation of the candidate is done jointly by the university supervisor and district personnel. *3 semester hours*

TED 542 INTRODUCTION TO PASCAL

The objective of this course is to prepare educators to teach PASCAL programming with topics from structured programming. The course emphasizes techniques for classroom instruction and uses IBM PC and modern-based compilers. *3 semester hours*

TED 543 PROGRAMMING IN C++

The objective of this course is to introduce and demonstrate the use of the C++ programming environment and PC-DOS. Emphasis is placed on the use of algorithms, proper documentation, program, structure, and top-down program design. A brief overview and history of the C++ language is presented, including the relationship to the development of algorithms and proper programming practices in computer science. *3 semester hours*

TED 545 PROGRAMMING IN JAVA

The basic objective of this course is to prepare secondary computer science teachers to teach the entire A-level course content of the Advance Placement Examination using Java as the source code. Java is studied as an application language and not as used in internet programming. A brief overview and history of the Java language is presented, including its relation to the development of algorithms, data structures, and proper programming practices implemented in computer science as a problem solving methodology. An introduction to the Java programming environment and PC-DOS is given. Special attention is directed to the use and implementation of Java's object-oriented (OO) features, including its special classes and structures. Suggestions and discussions are directed toward methods and strategies for teaching of computer science, specifically, teaching Java in an advanced placement environment. The course includes all basic aspects of the Java language: fundamental storage units, I/O, branching, iteration, modularity, and implementation of OO classes. *3 semester hours*

TED 551 ALGORITHMS AND DATA STRUCTURES

This course prepares secondary computer science teachers to teach the A-B level course content of the College Board Advanced Placement Examinations in computer science. Emphasis is placed on the development and implementation of

algorithms and data structures, object-oriented programming, and programming methodology. Prerequisite: TED 542, 543, or 545. *3 semester hours*

TED 610 PRACTICUM IN ASSISTIVE AND INSTRUCTIONAL TECHNOLOGIES

Teacher candidates have opportunities to observe and implement a range of assistive technologies used with individuals of diverse abilities in the home, community, and schools. Consideration for facilitating universal design for adaptive environments is given. An emphasis is placed on collaborating with families, special and general educators, related specialists (OT, PT, and speech and language pathologists), technology facilitators, and AT specialists to design, implement, and assess the integration of assistive technology. This course requires 20 hours of fieldwork. *3 semester hours*

TED 701 ADVANCED WEB PAGE DESIGN

This course focuses on the design, page layout, and graphic preparation skills necessary to produce full-functioning web pages. Students create several web page examples, incorporating more complex features and skills. Practical exercises are implemented to focus on specific production skills. Participants are shown how to set up and manage a website within Dreamweaver. The course explains advanced site management features, including statements and producing rollover images and forms. Prerequisite: TED 521 or equivalent. *3 semester hours*

TED 702 ADVANCED INTEGRATION AND TECHNOLOGY DESIGN

This course examines technology's possibilities in instructional design. Topics include literacy in a technological age, learners as problem solvers, global influences, and how teachers use technology to design learning. Prerequisite: TED 502 or equivalent. *3 semester hours*

TED 703 ADVANCED DIGITAL MEDIA CONCEPTS

This course enables students to continue mastering software applications such as Photoshop, Flash, Dreamweaver, and other digital media production tools. While honing their creative processes, students explore the various digital output options, such as DVD, the web, CD-ROM, and audio CD, developing skills in the design of web sites, information architecture, and interactivity. This course helps students acquire the skills necessary to learn how to use new and emerging software tools and technology on their own. Prerequisite: TED 532 or equivalent. *3 semester hours*

TED 801 TECHNOLOGY ISSUES IN K-12 EDUCATION

This course examines the latest information and trends regarding educational technology. Topics such as emerging technologies, implementing technology for learning, and state of staff development will be examined. Prerequisite: TED 504 or equivalent. *3 semester hours*

TED 5100 INTRODUCTION TO INSTRUCTIONAL AND ASSISTIVE TECHNOLOGIES

This course provides learning experiences that help develop knowledge of technology integration and its ability to support students with diverse abilities, including students who are English language learners (ELL). Students acquire instructional technology strategies that support differentiated practices and can be applied to the construction of lesson and activity plans, and instructional goals and objectives that incorporate content, pedagogy, and developmental considerations consistent with state learning standards. Participants have opportunities to create

assessments utilizing a variety of technologies. Additionally, the course assists students' understanding of the various types of adaptive and assistive technologies used in special education. This course complements and complies with the *International Society for Technology in Education Foundation Standards for Teacher Preparation Programs and Competencies* as outlined by the Pennsylvania Department of Education. *2 semester hours*

MATHEMATICS EDUCATION

MAED 541 TEACHING DEVELOPMENTAL MATHEMATICS

This course examines the structure of secondary school mathematics with a particular focus on developmental mathematics. *The Principles and Standards for School Mathematics*, a publication of the NCTM (National Council of Teachers of Mathematics), provides a focus for this course. A strong emphasis is placed on mathematics as problem solving, communication and reasoning, and mathematical connections. Appropriate methods for teaching secondary school mathematics are explored. Mathematical topics are also presented in a historical context and take into account students with special needs. Pre- or corequisite: ED 511 or permission of the instructor. *3 semester hours*

MAED 542 TEACHING GEOMETRY IN THE SECONDARY SCHOOL

This course provides students with an overview of Euclidean and non-Euclidean geometries, and the impact of technology on the teaching of geometry. Techniques and methods for helping secondary school students learn the basic principles of geometry are explored. This course develops and uses geometry problem-solving processes, including the notions of proof. Through activities, students become familiar with using technology (*Geometer's Sketchpad*, the internet, and graphing calculators), constructions, and the historical development of geometry. Prerequisite: MATH 141 or permission of the instructor. *3 semester hours*

MAED 543 TEACHING ALGEBRA

Students explore and evaluate what is happening in the algebra classroom of today and what might happen in the algebra classroom of the future. Topics covered include functions, systems of equations and inequalities, matrices, data analysis, sequences and series, and probability. The historical development of algebra will be integrated throughout the course. Students will be exposed to the uses of technology in the teaching of algebra, such as the graphing calculator, the internet, and the World Wide Web. Prerequisite: MATH 141 or permission of the instructor. *3 semester hours*

MAED 544 THE DEVELOPMENT OF ANALYSIS SINCE NEWTON

This course provides students with an introduction to the field of mathematical analysis—in particular, real analysis. The mathematical content includes a review of the techniques of calculus, the Fundamental Theorem of Calculus, a rigorous approach to the concept of limits, sequences, infinite series, and the evolution of the idea of a function. A historical approach to these topics will be taken, and proofs will be stressed throughout the course. Prerequisites: MATH 141 and 142, MAED 542 and 543, or permission of the instructor. *3 semester hours*

MAED 545 MATHEMATICAL MODELING

This course provides students with an understanding of the mathematical systems used in the teaching of the physical, biological, and social sciences at the secondary level. Mathematical

models using mainly discrete mathematics will be presented. The purpose of this course is to provide prospective mathematics teachers with an understanding of the process of applying mathematics. The mathematics content may include graphs and digraphs, paths and connectivity, statistics, probability, Markov analysis, game theory, theory of voting, and difference equations. Prerequisites: MATH 141 and 142, and ED 510 or permission of the instructor. *3 semester hours*

MAED 546 NUMBER THEORY

This course provides students with an introduction to elementary number theory. Techniques of proof and rigor and the history of mathematics are stressed. Students are given an opportunity to practice their teaching skills through a class presentation. The mathematical content includes the Euclidean Algorithm, congruences, magic squares, diophantine equations, and other topics as time permits. Prerequisites: MATH 142 and MAED 544. *3 semester hours*

SCIENCE EDUCATION

SCED 575 STRATEGIES AND MATERIALS FOR TEACHING SCIENCE IN THE ELEMENTARY SCHOOL AND EARLY CHILDHOOD

With a course focus on early childhood and elementary school science (emphasis K–6), students learn how to implement various teaching strategies in elementary school science. In addition to working through science activities developed from everyday materials, students participate in activities from current national science curriculum reform efforts. These activities exemplify using inquiry-based lessons to teach science. This course contains a fieldwork component in a classroom setting. Pre- or corequisites: ED 507, 517, or 518 and 511. *3 semester hours*

SCED 576 STRATEGIES AND MATERIALS FOR TEACHING SCIENCE IN THE SECONDARY SCHOOL

Hands-on experiences with demonstration materials, student laboratory activities, computer simulation, and opportunities to observe science education in a field setting are included in this course. Planning, organization for teaching, assessment, and the selection of materials receive major emphasis. Pre- or corequisites: ED 507, 517, or 518 and 511. *3 semester hours*

SCED 577 PHYSICAL SCIENCE FOR ELEMENTARY AND MIDDLE SCHOOL EDUCATORS

This course is designed to enhance elementary/middle school science teachers' conceptual understanding of physical science through examination of everyday phenomena, rather than through the utilization of more common theoretical approaches. Emphasis will be on the search for and use of evidence to provide the basis for drawing scientific conclusions. *3 semester hours*

SCED 582 BIOLOGY FOR ELEMENTARY AND MIDDLE SCHOOL EDUCATORS

This course focuses on instructing elementary and middle school teachers how to use biological knowledge as a way of teaching scientific inquiry. In addition, this course provides teachers with the framework, both content knowledge and techniques, to creatively teach students the basic principles of life science. Lessons are developed around national and state science standards. An emphasis is placed on hands-on laboratory activities. No previous training in life sciences is required. *3 semester hours*

SCED 583 THE NEW GENERATION OF SCIENCE CURRICULA

This course is designed to introduce standards-based, inquiry-centered science curriculum models to both prospective and practicing teachers. Students will spend much of their time working with actual units from selected innovative programs. *1–3 semester hours*

SCED 584 DEMONSTRATIONS FOR SECONDARY PHYSICAL SCIENCE EDUCATORS

Teachers not only master demonstration techniques and strategies for “getting the most mileage” from demonstrations, but also add several dozen physics and chemistry demonstrations to their repertoire. Required printed materials are provided. *3 semester hours*

SCED 585 FIELD ECOLOGY FOR TEACHERS

Teachers learn how to use ecological inquiry as a means of teaching scientific inquiry. The course will demonstrate that ecology is an extremely accessible topic to teachers at all grade levels. Its design is based on the premise that teachers must experience the process of ecological inquiry to construct their own understanding of how to teach this process. Participants learn field ecology sampling techniques and data analysis to teach inquiry-based environmental education at the level appropriate to the students they teach during the school year. No previous training in environmental education is required. *3 semester hours*

SCED 586 METHODS AND MATERIALS FOR TEACHING ENVIRONMENTAL SCIENCE

This course is designed to accommodate the needs of elementary and secondary teachers. Significant effort is invested in reviewing existing materials and programs for purposes that meet the needs of the individual teacher's classrooms, schools, or districts. The development of teaching methods and strategies are important course outcomes. *3 semester hours*

SCED 587 METHODS AND MATERIALS FOR TEACHING EARTH AND SPACE SCIENCE

Existing print and nonprint resources are reviewed and evaluated with emphasis on the needs students have for their own classrooms, and their schools and districts. Viewing earth science as a “fertile field” for interdisciplinary/integrated science studies will be an important outcome. The tools to look at earth and space science using both the 2061 Benchmarks and the National Science Education Standards are provided. *3 semester hours*

SCED 588 SPECIAL TOPICS

Topics that have special appeal to instructors and students because of their timely quality and the particular qualifications of the instructor are periodically offered. Newly developed courses may be offered in this category prior to their formal approval and assignment of course numbers. When more than one special topic course is offered in a semester, the registrar may assign alternate course numbers for these offerings. *1–3 semester hours*

SCED 589 INTEGRATED SCIENCE, TECHNOLOGY, AND METHODS FOR ELEMENTARY EDUCATION

This course is designed for elementary and middle school educators to integrate selected areas of content from life, earth/space, physical, and environmental sciences within the contexts of scientific inquiries and investigations, demonstrations, and special topic areas. Hypermedia development and application in science education will be both discussed and practiced. Prerequisite: TED 503 or permission of instructor. *3 semester hours*

SCED 590 PERUVIAN AMAZON ECOLOGY

This course is designed to provide teachers with a variety of hands-on rainforest field experiences and techniques that they can use in their own classroom environments. The course offers a structured introduction to tropical systems and consists of a minimum, three-week effort. Participants will assist scientists conducting research and will also construct an original research project that is relative to their teaching goals and standards. Three components of the course include at least 20 hours of pre-trip reading, more than 45 hours of field study, and 25 plus hours of reflection and application development. Field work takes place in the Amazon Biosphere Reserve at the Amazon Conservatory of Tropical Studies located in the heart of the Amazon Rainforest in Iquitos, Peru. *2 semester hours*

SCED 630 EVALUATION AND ASSESSMENT I—ELEMENTARY EMPHASIS

Students examine a variety of existing standardized and teacher-made tests to identify the levels of learner understanding required by test items plus the “match” of knowledge being tested with such standards as Project 2061 Benchmarks and the NSRC Science Teaching Standards. The practice of inferring outcomes for existing test items leads to skill in the development of assessments for outcomes originating from the new standards and/or Project 2061 Benchmarks. *3 semester hours*

SCED 631 EVALUATION AND ASSESSMENT I—SECONDARY EMPHASIS

Students examine a variety of existing standardized and teacher-made tests to identify the levels of learner understanding required by test items plus the “match” of knowledge being tested with such standards as Project 2061 Benchmarks and the NSRC Science Teaching Standards. The practice of inferring outcomes for existing test items leads to skill in the development of assessments for outcomes originating from the new standards and/or Project 2061 Benchmarks. *3 semester hours*

SCED 632 THE USE OF TECHNOLOGY IN SCIENCE EDUCATION

This course enables students to examine all new technologies which are now available for teacher use. Understanding how the technology operates is strongly supported by efforts to use it in appropriate locations and context within the science curriculum and within detailed courses of study. *3 semester hours*

SCED 633 MANAGING THE SCIENCE PROGRAM

Budgeting, sources of materials, short- and long-range planning, evaluating facilities, safety and storage, maintaining inventories, and developing instruments to gather data about materials and practices are included in this practical course required of all who have a leadership/managerial role in science education. *3 semester hours*

SCED 634 SCIENCE CURRICULUM REVIEW AND REVISION I—ELEMENTARY

Students examine a variety of schema for reviewing science curricula and engage in extended practice of reviewing actual curricula as well as a variety of state frameworks and course syllabi. They use the NSRC (National Science Resource Center) Standards and the Project 2061 Benchmarks to design and develop curricular frameworks and course syllabi. The development and statement of outcomes are of major importance. *3 semester hours*

SCED 635 SCIENCE CURRICULUM REVIEW AND REVISION II—SECONDARY

Students examine a variety of schema for reviewing science curricula and engage in extended practice of reviewing actual curricula as well as a variety of state frameworks and course syllabi. They use the NSRC (National Science Resource Center) Standards and the Project 2061 Benchmarks to design and develop curricular frameworks and course syllabi. The development and statement of outcomes are of major importance. *3 semester hours*

FACULTY**Thomas Benedetti**

Associate Professor
BA, LaSalle Univ.; PhD, Temple Univ.
(*modern languages*)

Marcia Bolton

Associate Professor, Director of Teacher Intern Program, & Director of Student Teaching
BA, Univ. of Florida; MEd, Univ. of S. Carolina; EdD, Shenandoah Univ.
(*education leadership, curriculum and instruction, reading*)

Kathleen Bowes

Clinical Associate Professor
BS, West Chester Univ.; MEd, Rosemont College; EdD, Wilmington College
(*instructional technology*)

Geraldine Bloemker

Associate Provost, Clinical Associate Professor
BA, MA, MS, Villanova Univ.; PsyD, Widener Univ.

Bernard R. Brogan

Professor
BSEd, Northern Illinois Univ.; EdM, Boston Univ.; PhD, Univ. of Wisconsin
(*educational leadership, social studies*)

Antonia D’Onofrio

Professor
BA, Univ. of Pennsylvania; MEd, PhD, Temple Univ.
(*research and statistics, psychology*)

J. Joseph Edgette

Professor Emeritus
BS, West Chester State College; MS, MA, PhD, Univ. of Pennsylvania
(*intern program, English education, folklore, foundations*)

Lawrence A. Fehr

Professor
BA, Monmouth College; MA, Fairleigh Dickinson Univ.; PhD, Univ. of Cincinnati
(*adolescent psychology, psychology of school-age children*)

John C. Flynn Jr.

Assistant Dean, Associate Professor
BS, Bloomsburg Univ.; MS, Medical College of Pennsylvania; PhD, Univ. of Pennsylvania
(*higher education*)

Brenda Gilio

Acting Dean; Associate Professor

BS, Shippensburg Univ.; MEd, EdD, Lehigh Univ.
(K–12 education and leadership)

Mary Gozza-Cohen

Assistant Professor

AAS, Orange County Community College; BA, MS, PhD,
Univ. at Albany
(special education)

James T. Harris III

President, Professor

BEd, Univ. of Toledo; MEd, Edinboro Univ. of Pennsylvania;
DEd, Pennsylvania State Univ.
(education leadership)

Kathryn Healey

Associate Professor

BA, Vassar College; MA, PhD, Bryn Mawr College
(group dynamics, counseling)

Annemarie B. Jay

Associate Professor

BS, MEd, West Chester State College; PhD, Univ. of Pennsylvania
(early literacy, strategic teaching and learning, comprehension)

Xiaobao Li

Assistant Professor

BA, Ehuzhou Teacher College, China; Nanjing Normal Univ.;
China; PhD, Texas A&M Univ.
(mathematics education)

Louise Liable-Sands

Associate Professor

BS, Rowan Univ.; MEd, PhD, Univ. of Delaware
(science education)

Nadine K. McHenry

Associate Professor

BS, Pennsylvania State Univ.; MA Beaver College; EdD,
Temple Univ.
(elementary education)

Meghan J. Pifer

Assistant Professor

BA, Univ. of Pittsburgh; EdM, Boston Univ.; PhD, Penn State
Univ.
(higher education)

Dana Reisboard

Assistant Professor

BA, George Washington Univ.; MA, New York Univ., PhD,
Rutgers Univ.
(reading education)

Tracey Rush

Director of Field Experience, Assistant Professor,

BS, Univ. of Scranton; MS, St. Joseph's Univ.; DEd, Univ. of
Pennsylvania
(higher education, special education, reading)

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Assistant Professor

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(counselor education)

Lori Simons

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BA, Neumann College; MA, St. Joseph's Univ.; PhD, Temple Univ.
(psychology)

Merry L. Staulters

Assistant Professor

BS, Wheelock College; MS, PhD, State Univ. of New York at
Albany
(special education)

Mary W. Strong

Professor

BED, Duquesne Univ.; MA, EdD, West Virginia Univ.
(reading/language arts)

Timothy M. Sullivan

Associate Professor

BA, Stonehill College; MBA, Bryant Univ., EdD, Nova
Southeastern Univ
(higher education)

Richard Thurlow

Associate Professor

BS, PhD, Univ. of Minnesota
(instructional psychology, cognitive science, psychology of reading)

Ning Wang

Associate Professor

BS, MEd, Beijing Normal Univ., Peoples Republic of China;
MS, PhD, Univ. of Pittsburgh
(educational statistics and measurement)

David V. Ward

Professor

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(philosophy, ethics)

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Provost, Professor

BS, Emory Univ.; DPhil, Univ. of Oxford
(learning and memory, research methods)

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Professor Emeritus

BSEd, Kutztown Univ.; MEd, West Chester Univ.; PhD,
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(research and statistics, psychology)

Noreen M. Yoder

Associate Professor & Director, Child Development Center

BS, MEd, Cabrini College; EdD, Widener Univ.
(early childhood education)

ADJUNCT FACULTY

Dana R. Baker

Adjunct Assistant Professor

BS, MEd, Shippensburg Univ.; EdD, Widener Univ.

Debra Barzarsky

Adjunct Instructor

BS, MS, Miami Univ. of Ohio

Nancy Bishop

Adjunct Instructor

BS, Indiana Univ. of Pennsylvania; MEd, West Chester Univ.;
EdD, Immaculata Univ.

Robert E. Bleakley*Adjunct Instructor*

BS, Kean Univ.; MEd, Springfield College

William Bleam*Adjunct Instructor*

BS, Pennsylvania State Univ.; MA, West Chester Univ.

Nancy Bluebello*Adjunct Instructor*

EdD, Widener Univ.

Basil E. Bly*Adjunct Assistant Professor*

BA, Univ. of Virginia; MA, West Chester Univ.; EdD, Widener Univ.

Catherine Chaloult*Adjunct Instructor*

BA, Lock Haven Univ.; MEd, Temple Univ.

G. Michael Davis*Adjunct Assistant Professor*

BS, MEd, West Chester Univ.; EdD, Univ. of Pennsylvania

Donna M. Fabrizio*Adjunct Assistant Professor*

BS, St. Joseph's Univ.; MEd, EdD, Widener Univ.

Eugene Fiorini*Adjunct Assistant Professor*

BS, Pennsylvania State Univ.; MS, PhD, Univ. of Delaware

Richard L. Freishtat*Adjunct Assistant Professor*

BA, MA, Pennsylvania State Univ., PhD, Arizona State Univ.

Maggi D. Gehman*Adjunct Instructor*

BA, MEd, West Chester Univ.

Eleanor W. Gensemer*Adjunct Assistant Professor*

BA, MEd, EdD, Widener Univ.

Vanessa L. George*Adjunct Instructor*

BA, Univ. of Maryland; JD, Widener Univ.

Stanley Goldhaber*Adjunct Assistant Professor*

BS, Widener Univ.; MAEd, Beaver College; JD, Miami School of Law

Thomas C. Grubb*Adjunct Instructor*

BS, Cheyney Univ.; MS, West Chester Univ.

Mary Hayburn*Adjunct Instructor*

BS, Villanova Univ.; MEd, Widener Univ.

Margaret A. Herrick*Adjunct Assistant Professor*

BA, Franciscan Univ. of Steubenville; MRC, Wright State Univ.; PhD, Pennsylvania State Univ.

Marsha Hurda*Adjunct Instructor*

BS, James Madison Univ.; MEd, Penn State Univ.; EdD, Immaculata Univ.

Denise Kerr*Adjunct Instructor*

BA, St. Joseph's Univ.; MA, Villanova Univ.; EdD, Widener Univ.

Kenneth Koczur*Adjunct Assistant Professor*

BA, MA, Rowan College; EdD, Widener Univ.

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BS, SUNY-Potsdam

Marianne Leagans*Adjunct Instructor*

BS, SUNY-Cortland

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BS, Bloomsburg Univ.; MS, Wilkes Univ.; EdD, Widener Univ.

James J. Lynch*Adjunct Assistant Professor*

BA, Kean College of New Jersey; EdM, EdD, Rutgers Univ.

Arlen Marks*Adjunct Assistant Professor*

BA, Franklin & Marshall College; MS, Temple Univ.; EdD, Widener Univ.

Susan Milstein*Adjunct Instructor*

BS, SUNY; MA, Univ. of Maryland; MEd, PhD, Widener Univ.

Ronald J. Miros*Adjunct Assistant Professor*

BA, LaSalle Univ.; MEd, Cheyney Univ.; EdD, Temple Univ.

Robert L. Myers*Adjunct Professor*

BA, MA, PhD, Temple Univ.

William O'Connor*Adjunct Instructor*

BS, Drexel Univ.; MEd, Temple Univ.

Anthony Pinnie*Adjunct Assistant Professor*

BA, Pennsylvania State Univ.; MEd, EdD, Temple Univ.; JD, Widener Univ. School of Law

Susan Platt*Adjunct Assistant Professor*

BA, Antioch Univ.; MEd, Temple Univ.

Kathleen Reid-Agren*Adjunct Instructor*

EdD, Widener Univ.

David M. Rentschler*Adjunct Assistant Professor*

BS, MEd, West Chester Univ.; EdD, Widener Univ.

Robert L. Rinehart*Adjunct Instructor*

BA, Millersville Univ.; MA, EdM, Temple Univ.

Ann Robinson-Gordon*Adjunct Instructor*

AB, Douglass College; MEd, Temple Univ.

Timothy Scepansky

Adjunct Instructor

BS, Villanova Univ.; MEd, Widener Univ.

Thomas L. Seidenberger

Adjunct Assistant Professor

BS, Kutztown Univ.; MEd, Lehigh Univ.; EdD, Widener Univ.

Chris B. Sherk

Adjunct Assistant Professor

BS, Juniata College; MEd, Shippensburg Univ.; EdD, Widener Univ.

Matthew R. Shupp

Adjunct Assistant Professor

BA, MS, Shippensburg Univ.; EdD, Widener Univ.

Judy Simkin

Adjunct Instructor

BA, William Paterson Univ.; MEd, The College of New Jersey

Robert S. Stevens

Adjunct Assistant Professor

BS, Kutztown Univ., MEd, Cheyney Univ.; EdD, Widener Univ.

Michael A. Taylor

Adjunct Instructor

BS, Hahnemann Univ.; MS, Philadelphia Univ.

Jean Thorpe

Adjunct Instructor

BS, MEd, Temple Univ.

Anju A. Vaidya

Adjunct Instructor

BA, Univ. of Delaware; MEd, Widener Univ.

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Adjunct Instructor

BA, Rutgers Univ.; MPH, Univ. of Michigan

Kim Vindler

Adjunct Instructor

BS, Georgia Southern Univ.; MSW, Widener Univ.

Susan C. Waller

Adjunct Assistant Professor

BA, Grace College; MA, Hunter College; EdD, Widener Univ.

Kathleen Ward-Gaus

Adjunct Instructor

BS, Temple Univ.; MEd, Univ. of Pennsylvania

John N. Whitby

Adjunct Assistant Professor

BS, West Chester Univ.; MEd, EdD, Temple Univ.

Charles J. Wieners

Adjunct Instructor

BA, St. Joseph's Univ.; MA, Miami Univ. (Ohio)

Kevin W. Witchey

Adjunct Instructor

BS, Temple Univ.; MEd, Widener Univ.

Patricia Wolf

Adjunct Instructor

MEd, Cabrini College

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Adjunct Instructor

MA, West Chester Univ.

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