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The School of Education

About the School

[The School of Education](#) offers Pennsylvania Department of Education-approved programs to certify students who already hold bachelor's degrees to be teachers in elementary education (with an emphasis on mathematics, science, and technology), secondary education (in biology, chemistry, earth and space science, environmental education, general science, mathematics, or physics), and K-12 (instructional technology specialist and library science). Principal and superintendent certifications are also available. Individuals who complete the minimum requirements receive a teaching certificate and have the option to continue coursework to fulfill requirements in the graduate Science of Instruction master's degree program.

The master's degree programs are also available to those who already have teacher certification and/or do not wish to obtain a teaching certificate. Students who would like to pursue the instructional technology specialist teacher certification must already have Pennsylvania Instructional I certification or appropriate equivalent.

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Master of Science in Educational Administration

About the program

Using state and national leadership standards, this master's degree is designed to prepare and mentor future elementary and secondary educational leaders with the practical skills, knowledge and internship experiences to become effective leaders in rural, city and suburban schools. This program is ideal for prospective students holding a teaching or counseling certificate who wish to advance into school administration, or career-changers wanting to obtain a teaching and principal certification along with a master's.

All courses will be taught online; however, the campus experience will be provided each year through a two and- one-half-day Leadership Conference. This will provide the centering experience for the three stages of mentoring principal interns, new principals, and experienced principals in an opportunity for lifelong commitment in leadership. The conference will sponsor such activities as:

- Sharing of leadership portfolios, research, and student-led sessions
- Panel discussions led by city, suburban, and rural school leaders/mentors
- Seminars on critical issues led by Drexel faculty from across the university
- Nationally and internationally effective leaders as speakers and seminar leaders

The program is designed as a part-time cohort model, and can be completed in two years. View the [degree requirements](#) for more detailed information about the courses.

Program objectives

Graduates of the MS in Educational Administration will be prepared to:

- Meet Pennsylvania certification standards
- Facilitate the development, articulation, implementation, and stewardship of a school/district vision of learning that is shared and supported by the school community
- Advocate, nurture, and sustain a school culture and instructional program conducive to student learning and staff professional growth
- Ensure management of the organization, operations, and resources for a safe, efficient, and effective learning environment
- Collaborate with families and community members, responding to diverse community interests and needs, and mobilizing community resources
- Act with integrity, fairness, and in an ethical manner

- Understand, respond to, and influence the larger political, social, economic, legal, and cultural context
- Monitor and evaluate students' achievements and programs on challenging standards for external and internal accountability goals
- Build teacher leadership capacity and mentor principal interns
- Conduct and share action research that documents sustainability in meeting school accountability goals and has practical, immediate, and useful application for other educators

For additional information, visit the School of Education's [M.S. in Educational Administration](#) web page or the [Drexel e-Learning](#)'s web site.

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Master of Science in Educational Administration

Degree Requirements

Students complete a total of 46 credits consisting of 22 credits in core certification courses, 21 credits in core master's courses, and a 3-credit elective.

Core Certification Courses	22.0 Credits
EDUC 702 School Leadership and Decision Making	3.0
EDUC 705 School Law and Politics	3.0
EDUC 708 Managing Integration of Technology in Instruction	3.0
EDUC 710 School Finance and Facilities	3.0
EDUC 712 School/Community Relations and Partnerships	3.0
EDUC 714 Instructional and Curriculum Leadership	3.0
EDUC 715 School Principal Internship: Technology	1.0
EDUC 716 School Principal Internship: Finance	1.0
EDUC 717 School Principal Internship: Leadership	1.0
EDUC 718 School Principal Internship: Relations	1.0

Core Master's Degree Courses	21.0 Credits
EDAM 500 Leading in Urban, Rural, Suburban School Settings	3.0
EDAM 502 Resource Management, Allocation and Entrepreneurship	3.0
EDAM 522 Evaluation and Assessment Competencies	3.0
EDAM 524 Mentoring and Collaborative Leadership	3.0
EDAM 526 Interpreting and Evaluating Research and Achievement Data	3.0
EDAM 528 Research Methodology for Action Research	3.0
EDAM 540 Action Research Project	1.0

Elective	3.0 Credits
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Performances

The performances for meeting Pennsylvania leadership standards and National Leadership Standards include a Leadership Portfolio. The Leadership Portfolio includes:

- Four Log Reflections -- explaining growth in log reflection over each term
- Evidence of 600 hours across four terms logged in the Internship

- Logs over 48 weeks
- Four term Goal Statements and Reflections on accomplishments
- Two to three artifacts on each of the ELCC standards totaling 14 to 21 or more artifacts
- An explanation of how each artifact shows applications of skill on each identified standard
- Four evaluations on the ELCC Standards and Drexel Competencies completed by the school site supervising principal

In addition, students must have a passing score on 580 on the Pennsylvania PRAXIS for School Leaders. A prior assessment was the EtS Licensure Leadership PRAXIS what will be accepted until 2010.

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Master of Science in Global and International Education

About the program

The School of Education's Master of Science in Global and International Education will prepare students to work effectively with the complex global challenges, trends, and issues influencing education and learning in diverse parts of the world, including the United States.

Today, leaders are needed who are trained with the skills and practical knowledge required to work effectively within the context of global economic, political, cultural, and community influences on education; are aware of global trends and issues in the field of education; recognize the various dimensions of educational interventions and are able to analyze the implications for learners within and beyond mainstreams; and can critique the roles and approaches of international, comparative, and educational research. The M.S. in Global and International Education will provide these necessary tools, experiences, understandings, and related attitudes.

Program objectives

The mission of the Master of Science in Global and International Education is to prepare students with the skills, knowledge, and attitudes necessary to work effectively with the complex economic, political, cultural, and social contexts that influence education and learning in diverse parts of the world. In addition to being aware of global trends and issues of diverse approaches to education, students will develop the attitudes necessary to support learners and learning within and beyond mainstream educational systems.

Graduates of this program will be qualified to pursue careers in higher education, ESL programs, education abroad, law firms, international education associations, accreditation agencies, local community international outreach centers, U.S. government, international development or human service agencies, non-governmental agencies, as well as act as administrators, managers, and researchers in national and international organizations, foundations, associations, and corporations.

Graduates of this program will lead their organizations in addressing the dramatic change in society and culture due to globalization and how these influence education.

The program is designed as a part-time cohort model, and can be completed in two years. View the [degree requirements](#) for more detailed information.

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Master of Science in Global and International Education

Degree Requirements

A Master of Science in Global and International Education is a part-time online program. Students complete a total of 45 credits, consisting of six core courses, four primary concentration courses, three secondary concentration courses, an elective and a capstone course.

Core Courses	18.0 Credits
EDGI 500 Introduction to Global, International and Comparative Education	3.0
EDGI 508 Understanding Research in Global, International and Comparative Education	3.0
EDGI 510 Culture, Society and Education in Comparative Perspective	3.0
EDGI 512 Globalization and Educational Change	3.0
EDGI 518 Analysis of Policy Issues in Global, International and Comparative Education	3.0
EDGI 520 Comparative Economics of Education	3.0

Primary Concentration Courses	12.0 Credits
EDGI 502 Global, International and Comparative Education II	3.0
EDGI 504 History and Theory of Comparative Education	3.0
EDGI 506 Comparative Higher Education Systems	3.0
EDGI 514 Education and National Development	3.0

Secondary Concentration I: Peace Education*	9.0 Credits
EDGI 530 Peace Education	3.0
EDGI 532 International Organizations in International Education	3.0
EDGI 534 Conflict Resolution in an International Context	3.0

*As an alternative secondary concentration, students may create a customized area of study from other Drexel University departments/programs such as International Business Administration, Women's Studies, or Science/Technology/Society.

Elective	3.0 Credits
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Students select one course as an elective from within the School of Education or a course (with School of Education approval) from another Drexel University program/department, such as International Business Administration, Foreign Language, Women's Studies, or Science/Technology/Society.

Sample Electives:

EDGI 600 Study Abroad Experience	3.0
EDGI 610 International Ecotourism and Educational Experience	3.0

Capstone Course	3.0 Credits
EDGI 715 Co-Op with Portfolio	3.0

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Master of Science in Higher Education

About the program

The M.S. in Higher Education is designed specifically to prepare highly skilled and knowledgeable practitioners for administrative and management careers in higher education in the United States and abroad. Graduates will be qualified to pursue careers as professionals in university and college offices as well as careers in national and international organizations, foundations, associations, and corporations.

Program objectives

Students graduating with an M.S. in Higher Education will possess outstanding leadership, organizational, interpersonal and advocacy skills, including the ability to communicate effectively with internal and external groups. Students will be provided with in-depth knowledge regarding both public and private (non-profit and for-profit) institutions, as well as small and large institutions and multi-campus institutions.

About the curriculum

The curriculum for the M.S. in Higher Education incorporates an interdisciplinary approach, with courses offered through the School of Education, LeBow College of Business and the Goodwin College of Professional Studies. The program integrates leading learning strategies and instructional technologies into the course delivery. Courses introduce students to best practices, current research, software applications and database management systems. Students demonstrate knowledge and skills through both individual and group projects.

The 45 required credits are made up of 6 core courses, 3 electives, 1 capstone course (including a co-op assignment and submission of a professional portfolio) as well as 4 courses in one of the following areas of concentration:

- Administration and Organizational Management
- Financial Management in Higher Education
- Enrollment Management
- Academic Development, Technology and Instruction
- Institutional Advancement
- Institutional Research and Planning

View the [degree requirements](#) for more detailed information about the courses.

The program is designed as a part-time cohort model, and can be completed in two years. View the [program delivery options](#) for more information.

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Master of Science in Higher Education

The M.S. in Higher Education requires 45 credit hours, consisting of 39 hours of coursework and a 6 credit capstone course that includes a co-op assignment and results in the submission of a professional portfolio.

Core courses	18.0 Credits
EDHE 500 Foundation of Higher Education	3.0
EDHE 510 Governance, Management & Administration in Higher Education	3.0
EDHE 520 Student Development & Customer Service Management	3.0
EDHE 540 Outcomes Assessment and Continuous Improvement	3.0
EDUC 705 School Law and Politics	3.0
ORGB 631 Leading Effective Organizations	3.0

Capstone	6.0 Credits
EDHE 715 Co-op with Portfolio	6.0

Electives	9.0 Credits
Students select three courses as electives from courses within the M.S. in Higher Education concentrations. Courses within a student's primary concentration do not count as electives.	

Higher Education Administration and Organizational Management	
EDHE 600 Human and Organizational Performance Improvement	3.0
EDHE 602 Managing Campus Operations	3.0
EDHE 606 Higher Education Career Development	3.0
AADM 710 Strategic Planning and Evaluation	3.0

Institutional Advancement	
EDHE 610 Institutional Advancement	3.0
EDHE 614 Alumni Relations	3.0
EDHE 616 Institutional Communications, Marketing and Public Relations	3.0
AADM 650 Fund Development for the Arts	3.0

Financial Management

EDHE 602 Managing Campus Operations	3.0
EDHE 624 Capital Financing, Business Development & Asset Management	3.0
EDHE 626 Public-Private Funding & Legal Issues	3.0
BUSN 501 Measuring and Maximizing Financial Performance	3.0

Academic Development, Technology & Instruction

EDHE 634 Proposal Writing & Sponsored Project Management	4.0
EDUC 522 Evaluation of Instruction	3.0
EDUC 524 Current Research in Curriculum and Instruction	3.0
EDUC 530 Advanced Techniques in Instruction and Assessment	3.0

Institutional Research

EDHE 640 Foundation of Institutional Research	3.0
EDHE 644 Student Assessments & Academic Program Evaluation	3.0
EDHE 646 Survey Tools, Statistical Software and Effective Reporting	3.0
EDUC 803 Educational Research Design	3.0

Enrollment Management

EDHE 650 Introduction to Enrollment Management	3.0
EDHE 652 Enrollment Marketing, Recruitment and Retention	3.0
EDHE 654 Financial Aid & Enrollment Management	3.0
EDHE 656 Enrollment Management Database Systems & Management	3.0



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Master of Science in Human Resource Development

About the program

Human resource development (HRD) refers to the principles, methods, and techniques for assessing and responding to the learning and organization development needs of employees and their organizations. The Master of Science in Human Resource Development prepares students to have a positive direct and indirect influence on the future of human resource development in its many forms. The program is designed to prepare graduates for strategic roles in promoting employee and organizational learning in various national and multi-national organizations, as well as to promote the use and integration of technology to support organizational learning.

The M.S. degree in Human Resource Development incorporates an interdisciplinary curriculum. Students may choose an area of concentration through either the School of Education or the LeBow College of Business. The program integrates leading learning strategies and instructional technologies into course delivery. Courses expose students to best practices, current research, software applications, and database management systems. Students demonstrate their knowledge and skill acquisition through individual and group projects.

The curriculum is 45 credit hours consisting of 39 hours of course work and a 6-credit co-op assignment. Students complete nine core courses and four courses from one of the following concentrations:

- Human Resource Development in Business Settings
- Human Resource Development in Educational Settings
- Human Resource Development in Global Settings

For additional information, contact the [School of Education](#) or view the Master's degrees online on the [Drexel Online Learning](#) web site.

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Master of Science in Human Resource Development

45.0 credits

The M.S. in Human Resource Development program requires 45 credit hours consisting of 39 hours of coursework and a 6-credit capstone course that includes a co-op assignment and results in the submission of a professional portfolio.

Degree Requirements

Core Courses	27.0 Credits
EHRD 500 Foundations of Human Resource Development	3.0
EDHE 600 Human and Organizational Performance	3.0
EDUC 505 Instructional Systems Design	3.0
EDUC 536 Distance Learning	3.0
EHRD 650 Learning Leadership in Organizations	3.0
EDHE 660 Principles of Adult Education	3.0
EDUC 533 Designing Virtual Communities for Staff Development	3.0
EDUC 804 Studying Educational Organizations and Programs	3.0
EHRD 600 Consulting and Leadership Coaching	3.0

Students select one Concentration:

**12.0
Credits**

HRD in Business Settings Concentration

The following courses in the graduate Business curriculum are highly recommended. Any substitution must be approved by the faculty advisor.

ORGB 625 Leadership and Professional Development	3.0
ORGB 631 Leading Effective Organizations	3.0
MGMT 780 Strategic Management	3.0
FIN 601 Corporate Financial Management	3.0

HRD in Educational Settings Concentration

The following courses in the graduate Education curriculum are highly recommended. Any substitution must be approved by the faculty advisor.

EDAM 502 Resource Management, Allocation and Entrepreneurship	3.0
EDAM 528 Research Methodology for Action Research	3.0

EDAM 524 Mentoring and Collaborative Leadership	3.0
EDHE 606 Higher Education Career Development	3.0

HRD in Global Settings Concentration

The following courses in the graduate curriculum for Global and International Education are highly recommended. Any substitution must be approved by the faculty advisor.

EDGI 500 Introduction to Global, International and Comparative Education	3.0
EDGI 510 Culture, Society and Education in Comparative Perspective	3.0
EDGI 532 International Organizations in International Education	3.0
EDGI 534 Conflict Resolution in an International Context	3.0
Internship/Co-op (2 terms)	6.0 Credits
HRED 715 Co-op Seminar Course with Portfolio	6.0



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Master of Science of Instruction

The Master of Science in the Science of Instruction program builds on Drexel's discipline-based teacher education program at the undergraduate level and on the Graduate Intern Teaching Certificate program at the graduate level. Coursework for the Graduate Intern Teaching Certificate program forms the core of this master's degree; the same requirements for Intern and Instructional I Certification apply.

The program is designed primarily for those who wish to teach high school mathematics, science, and/or technology, especially as a subsequent career, although the degree may be obtained without completing the requirements for a teaching certificate. The program is especially appropriate for those who already possess a degree in mathematics, science, or engineering. In addition, the program is relevant to individuals in careers such as business and communications who wish to teach at the elementary grade levels. The program is designed for part-time as well as full-time study. Full-time students can usually complete the program in one year. Both the Pennsylvania Intern Certificate and the Instructional I Certificate may be attained through this program before the degree requirements are met.

The graduate Science of Instruction program incorporates current research on teaching and provides in-depth preparation in pedagogy, curriculum development, heuristic diagnostic teaching, implications of learner and task characteristics for instructional design, the latest techniques in evaluation of instruction, and use of interactive technology in instruction. The student is provided opportunities to synthesize theoretical and practical knowledge through field study in elementary and secondary classrooms. Students seeking a teaching certificate are required to engage in classroom research as a component of several of the required courses. The main goal of the program is to prepare teachers who will strengthen mathematics, science, and technology instruction in kindergarten through high school.

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Master of Science of Instruction

Degree Requirements

A minimum of 45 credits is required for students with or without prior certification (including 15 credits of professional electives).

Core Courses

At a minimum, 23 pedagogy credits will be required from the core courses for those without prior teacher certification. Students with prior certification or those seeking an add-on certification will select 11 credits from the core courses.

Courses	Credits
EDUC 520 Professional Studies in Instruction*	3.0
EDUC 522 Evaluation of Instruction	4.0
EDUC 523 Diagnostic Teaching	4.0
EDUC 524 Current Research in Curriculum and Instruction	3.0
EDUC 525 Multimedia in Instructional Design	3.0
EDUC 526 Language Arts Processes	3.0
EDUC 540 Field Experience*	3.0

*Not available to those with prior teacher certification.

Content Categories

For students without prior teacher certification, 7 credits are required, selected from the following content categories. (A list of suggested courses is available from the department.) Students with prior certification or those seeking add-on certification select 19 credits from the content categories.

A. Mathematics and science

B. Technological pedagogy

C. Applied pedagogy

Evaluation of transcripts by a program advisor in relation to Pennsylvania state standards determines the required content courses for initial certification and add-on certification. To satisfy state certification requirements, undergraduate courses may be taken in instances where graduate courses are not appropriate. These

undergraduate courses will not satisfy graduate degree requirements. However, they will satisfy certification requirements and may satisfy requirements for salary increments in certain school districts. For those with prior certification who do not wish add-on certification, but desire to further professional competence, a distribution of courses from areas A, B, and C is selected under advisement on an individual basis.

Professional Electives

Students with or without prior certification select 15 credits of professional electives. Professional electives are selected with the advice of a program advisor to strengthen mathematics and science knowledge, to refine and update pedagogy competence, to broaden general education, to gain knowledge about the nature of information and information materials, to develop and refine skills in integrating technology into instruction, and to ensure that certification standards are satisfied. Professional electives may be taken from the core courses or from any course in the content categories. Any graduate course offered in the University may serve as a professional elective if the student has adequate preparation to take the course and it is deemed appropriate by the program advisor. The 15 credits of professional electives may comprise a combination of up to three Performance Learning Systems (PLS) courses and/or approved transfer credits. PLS courses must be taken at Drexel to count toward the master's degree.



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Master of Science in Learning Technologies

About the program

The M.S. in Science and Learning Technologies has been specifically designed to prepare graduate students to meet the critical challenges that schools and other organizations face related to technology learning needs.

The program provides multiple field experiences, extensive skill development in coaching and mentoring, and a yearlong internship for hand-on experiences in various settings. Each student will develop a unique plan of study in cooperation with a School of Education academic advisor. Students are expected to maintain a continuous registration and will be encouraged to take two courses per term until completion of their program of study.

Courses are offered in an online format. The program also features occasional on-campus events and an annual conference for presentation of program participant research papers and projects, as well as invited keynote speakers, workshops and poster sessions.

For additional information about this program, contact the [School of Education](#).

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Master of Science in Learning Technologies

45.0 credits

Degree Requirements

Core Courses	12.0 Credits
EDLT 536 The Learning Sciences and Instructional Design	3.0
EDLT 537 Technologies for Performance Support	3.0
EDLT 538 New Media Literacies	3.0
EDAM 528 Research Methodology in Action Research	3.0

Concentration Area Courses	18.0 Credits
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PA Certification in Instructional Technologies Specialist

EDUC 511 Computer Skills for Teachers	3.0
EDUC 533 Designing Virtual Communities for Staff Development	3.0
EDUC 534 Developing Educational Leadership and Team Building	3.0
EDUC 535 Researching and Evaluating Technology	3.0
INFO 520 Professional and Social Aspects of Information Services	3.0
INFO 640 Managing Information Organizations	3.0

Professional Electives	9.0 Credits
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Electives are selected with the approval of an advisor from within the School of Education or from other Drexel programs.

Internship/Co-op (2 terms)	6.0 Credits
EDLT 539 Co-op Seminar Course with Portfolio	6.0



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Master of Science in Mathematics Learning & Teaching

About the program

The Mathematics Learning & Teaching Program has two broad goals: (1) the development of mathematical thinking and reasoning skills and their relation to student-centered instruction and (2) the development of the knowledge, skills, dispositions, and experiences necessary to incorporate effective student-centered instruction in the classroom.

About the delivery format

In the first year, all courses in this program will be offered in an online format. In subsequent years, the School of Education expects to offer campus-based versions of these courses as well as site-based versions at local schools. Regardless of the delivery format, all participants will be invited to take part in a yearly face-to-face conference that will be simulcast via the web. This conference will include a keynote speaker and presentations from each lesson study group regarding their research lesson and the results of their design, implementation, and revision.

For additional information about this program, contact the [School of Education](#).

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Master of Science in Mathematics Learning & Teaching

45.0 credits

Degree Requirements

The M.S. in Mathematics Learning and Teaching program involves the completion of 45 credit hours of courses and will position teachers to implement high-quality, student centered instruction. The required courses in this program fall into three categories:

- the *education core* (14 credits) provides students with a breadth of expertise in student-centered, technology-intensive instruction
- the *mathematics education core* (27 credits) involves four student-centered pedagogy courses and a full year of lesson study, implementation, and analysis (in the spirit of action research). The mathematics education core concludes with a capstone research course that provides participants with an introduction to research in mathematics education, including reading and discussing seminal articles and reviewing the literature on a given topic with an emphasis on topics with personal relevance to each individual teacher.
- *elective courses* (4-6 credits) allow participants to tailor their degree experience to their interests and career paths.

Education Core Courses	14.0 Credits
EDUC 522 Evaluation of Instruction	4.0
EDUC 523 Diagnostic Teaching	4.0
EDUC 524 Current Research in Curriculum and Instruction	3.0
EDUC 525 Multimedia in Instructional Design	3.0

Mathematics Education Core Courses	27.0 Credits
MTED 501 Proportional and Algebraic Reasoning	3.0
MTED 502 Geometry and Geometric Reasoning	3.0
MTED 503 Data Analysis and Probabilistic and Statistical Reasoning	3.0
MTED 511 Functions through the Curriculum	3.0
MTED 601 Diagnosing Student Mathematical Thinking	3.0
MTED 611 Virtual Field Experience I	1.5
MTED 612 Virtual Field Experience II	1.5
MTED 621 Collaborative Instructional Design and Analysis I	3.0
MTED 622 Collaborative Instructional Design and Analysis II	3.0

Electives

**4.0-6.0
Credits**

After consultation with an advisor, participants may choose electives from other graduate offerings in the School of Education (including educational technology, higher education, and global and international relations), special topics courses in mathematics education, or appropriate content courses offered by the [Mathematics Department](#).



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Master of Science in Teaching, Learning & Curriculum

About the program

The M.S. in Teaching, Learning and Curriculum is designed to provide students with advanced teaching knowledge and skills well beyond that required for initial Pennsylvania certification. Graduates of the program will be qualified to pursue careers in K-12 public and private schools, higher education, as well as local community and international outreach centers, state and U.S. government or human service agencies, and non-governmental agencies. Graduates will be prepared to function in a variety of roles as instructors, instructional leaders or researchers in local, state, national and international organizations, foundations, associations, corporations and private educational institutions. The program also provides a strong foundation for doctoral level studies.

Program Goals

Graduates of the M.S. in Teaching, Learning and Curriculum will:

- Possess advanced knowledge related to effective instruction in a variety of educational settings.
- Demonstrate skills in developing, analyzing, implementing, and evaluating existing and new instructional strategies and practices in a variety of educational institutions/organizations.
- Exhibit outstanding leadership, organizational, cross cultural, inter-personal and advocacy skills including the ability to communicate effectively with internal and external groups.
- Have in-depth knowledge of both public and private (non-profit and for-profit) institutions as well as small and large institutions.

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Master of Science in Teaching, Learning & Curriculum

Degree Requirements

Students will complete a total of 45 credit hours consisting of seven core courses, two research courses, and six concentration courses in an approved area.

Core Courses	21.0 Credits
EDUC 530 Advanced Techniques in Instruction and Assessment	3.0
EDUC 533 Virtual Learning Communities	3.0
EDUC 537 Learning Disabilities II	3.0
EDUC 608 Intercultural Learner	3.0
EDUC 714 Instructional and Curricular Leadership	3.0
EDUC 804 Studying Educational Organizations and Programs	3.0
EDUC 813 Educational Issues Seminar	3.0

Research Courses	6.0 Credits
EDUC 803 Research Design I	3.0
EDUC 810 Research Design II	3.0

Concentration Courses	18.0 Credits
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Students choose from the following concentration options with the approval of a graduate academic advisor and the program director:

- Science of Instruction
- Educational Administration
- Global and International
- Instructional Technology
- Higher Education
- Customized Concentration (including other Drexel academic departments)

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Ph.D. in Educational Leadership Development and Learning Technologies

Vision

The Ph.D. program in Educational Leadership Development and Learning Technologies is designed for those who aspire to be education researchers, university faculty or research analysts. The program is designed so that students will have the skills, knowledge and experience to be leaders and stewards of the field. Graduates from this program will develop research and critical thinking abilities directed toward the creation of new knowledge, integration and original application and/or teaching of existing knowledge and scholarly inquiry in their field of study.

Applicants to this program are expected to have high aptitude for research and inquiry in the field of education. They will express career interest in topics into which the faculty of the School are actively inquiring and researching. The assumption is that the most effective training for the Ph.D. stems from collaborative research and inquiry into topics of mutual interest by an able student and faculty scholars and researchers. The major emphasis of the program consists of the individual students and faculty members(s) jointly researching and inquiring into an area of study to conduct scholarly research.

Mission

The emphasis of the program is philosophical underpinning and theory-driven research. In addition to study in educational leadership, policy and the foundation of education, the program requires extensive preparation in quantitative and qualitative research methods. A small cohort of students will be admitted for full-time study. Students will be immersed in an internship to scholarly life, learning to teach and conducting research with faculty while completing coursework and other program requirements. These three areas will combine to:

- convey deep scholarly knowledge of education and related areas outside of education,
- promote a broad understanding of various methods of inquiry in education and develop competency in several of those methods,
- impart broad knowledge of theory and practice, and
- promote excellence as a college teacher.

Cohort and Delivery Format

This program will be limited to a cohort of full-time students for whom full funding is available and who will be fully embraced as members of the School of Education. The program will be delivered on-campus and will be situated in the framework of

collaborative, transformational learning and knowledge generation. Small seminars, independent projects and practicum opportunities are designed for an individualized program.

For additional information about this program, visit the [School of Education's Graduate](#) site.

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Ph.D. in Educational Leadership Development and Learning Technologies

Research/Inquiry

Research preparation is the foundation of the Ph.D. program. Students begin research activities during the first year of the program, and continue to develop their skills by conducting various research projects with School of Education faculty, presenting research findings at conferences and writing research papers, culminating with the dissertation work. Thus, the program is designed to immerse the student in educational content, inquiry and methodology, so as to ask critical questions and design procedures to conduct research.

Course of Study

The program of study is designed to provide a breadth and length of experience that will enable students to be immersed in a culture of scholarship and learning. There is mutual enrichment and learning from internships with faculty as students engage in teaching and research under faculty supervision and are guided in coursework. The total minimum credits for the degree is 60 graduate credits beyond a masters degree.

The curriculum has five components:

1. Leadership Core (18 Credits)
2. Research Core (17 Credits)
3. Problem-based research (9 Credits)
4. Technology Core (6 Credits)
5. Dissertation research (10 Credits minimum)

Degree Requirements

Leadership Core	18.0 Credits
EDUC 800 Educational Leadership and Change	3.0
EDUC 801 Creative Strategies for Educational Leaders	3.0
EDUC 804 Study of Educational Organizations and Programs Through Evaluation and Assessment Design	3.0
EDUC 806 Linking Educational Theory to Research	3.0
EDUC 807 Multi-Cultural and Cross-Cultural Perspectives in Leadership	3.0
EDUC 813 Educational Issues Seminar: Focus on Leadership Issues	3.0

Research Core		17.0 Credits
EDUC 803	Educational Research Design I	3.0
EDUC 810	Educational Research Design II	3.0
EDUC 815	Writing for Research, Publication, and Funding in Education	3.0
EDUC 835	Quantitative Methods and Data Analysis	4.0
EDUC 836	Qualitative Methods and Data Analysis	4.0

Problem-Based Research (Independent Study)		9.0 Credits
EDUC 799	Independent Study: Learning Through Problem-Based Research	3.0
EDUC 799	Independent Study: Learning Through Problem-Based Research	3.0
EDUC 799	Independent Study: Learning Through Problem-Based Research	3.0

Technology Core		6.0 Credits
EDUC 802	Using and Integrating Learning Technologies	3.0
EDUC 811	Designing and Developing Multimedia Applications for Learning	3.0

Required Doctoral Seminar and Dissertation		10 Credits (minimum)
EDUC 818	Applied Research Study	3.0
EDUC 880	Research Proposal Seminar*	1.0 or more
EDUC 998	Dissertation*	2.0 or more

* May be repeated for credit.

Possible Electives		
EDUC 512	Globalization and Educational Change	3.0
EDUC 805	History and Foundations of Education	3.0
PSY 530	Principles of Neuroscience	3.0

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Graduate Intern Teaching Certificate

Program Requirements

Graduate Intern Teaching Certificate applicants for elementary certification may come from a variety of undergraduate backgrounds. Applicants for secondary certification must have a bachelor's degree in an area related to that in which they intend to become certified. Minimum coursework requirements include 23 credits of pedagogy, which may be incorporated into the graduate Science of Instruction program or into the electives portion of another approved Drexel master's degree program in the subject area of certification.

Intern teachers may obtain a full-time teaching position after they have been recommended for the Pennsylvania Department of Education Intern Teaching Certificate. To be recommended, students must be admitted into the Drexel graduate program, obtain at least a B in EDUC 520 (Professional Studies in Instruction) or EDUC 523 (Diagnostic Teaching), obtain at least a B in EDUC 540 (Field Experience), and obtain the necessary scores on the appropriate sections of the Praxis Series assessment through Educational Testing Service (ETS).

Completion of all required pedagogy coursework with at least a B in each and a B average in required content courses and passing Praxis Series scores will satisfy requirements for Pennsylvania Instructional I Certification.

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Post-Bachelor's Teaching Certificate

About the program

This certificate program is designed for individuals who hold a Bachelor's degree and who seek to qualify for state teacher certification at the elementary or secondary level. This program is designed for career-changers as well as those who already serve as temporary, emergency, or substitute teachers and wish to earn a formal teaching credential.

Drexel University's Pennsylvania Department of Education-approved programs certify students who already hold Bachelor's degrees to be teachers in:

- Elementary Education
- Secondary Education
 - Biology, Chemistry, Physics, Earth and Space Science, General Science, Environmental Education, and/or Mathematics

Students completing the certification program have the option to continue coursework to earn the [M.S. in the Science of Instruction](#) degree. All graduate credits earned in this certificate program may be applied toward the Master's degree.

This program will prepares students for a Pennsylvania Instructional I Certificate. Students also have the option of earning the [Graduate Intern Teaching Certificate](#) during the course of the program. The Graduate Intern Teaching Certificate feature is only available to Pennsylvania residents.

For students intending to teach outside of Pennsylvania, through operation of interstate reciprocity agreements, a Pennsylvania teaching certificate may be converted to the analogous teaching certificate in another state. We recommend prospective students contact their state's Department of Education to find out these transfer procedures before proceeding.

Curriculum

Required Courses	Credits
EDUC 520 Professional Studies in Instruction	3.0
EDUC 522 Evaluation of Instruction	4.0
EDUC 523 Diagnostic Teaching	4.0
EDUC 524 Current Research in Curriculum and Instruction	3.0
EDUC 525 Multi-Media in Instructional Design	3.0

EDUC 526	Language Arts Processes	3.0
EDUC 540	Field Experience	3.0

The program is administered through Drexel eLearning. For the most current admission information, please visit www.drexel.com.

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Instructional Technology Specialist

The Instructional Technology Specialist Certificate program was designed to address the dramatically increasing need in public education for certified Instructional Technology Specialists at every level of K-12 schooling.

Applicants for Instructional Technology Specialist Certification should ideally possess valid Pennsylvania Instructional I or II Teaching Certification. Students working on their initial teaching certificate may begin working toward this certificate with special permission of a teacher education advisor. (Visit the [School of Education](#) for additional information.)

Minimum coursework requirements for the Instructional Technology Specialist Certificate include 18.0-29.0 credits of specific pedagogy.

Core Courses	Credits
EDUC 522 Evaluation of Instruction*	4.0
EDUC 523 Diagnostic Teaching*	4.0
EDUC 525 Multimedia in Instructional Design*	3.0
EDUC 533 Designing Virtual Communities for Staff Development	3.0
EDUC 534 Developing Educational Leadership and Team Building	3.0
EDUC 535 Researching and Evaluating Technology	3.0
INFO 601 Professional and Social Aspects of Information Services	3.0
INFO 640 Managing Information Organizations	3.0
INFO 688 Instructional Role of the Information Specialist	3.0
or	
EDUC 511 Researching and Evaluating Technology	

* Not required by students who received their initial teaching certification through Drexel's undergraduate program.

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Certificate in Mathematics Learning & Teaching

The Certificate of Graduate Studies in Mathematics Learning and Teaching requires the completion of 15 credit hours of coursework and is designed to provide mathematics teachers with development opportunities for enhancing the quality of their instruction. Recognizing many teachers pursue graduate studies while working full-time, the program has been designed so that it can be completed over five quarters (requiring only one course per quarter), and is offered in an online format.

Students in the certificate program take courses alongside those in the M.S. program. Certificate students may concurrently pursue the Master's degree in Mathematics Learning & Teaching or the [M.S. in Teaching, Learning and Curriculum](#). Additionally, students may take additional required courses towards this degree each semester. All of the Mathematics Learning & Teaching courses count towards the 18 required "concentration courses" of the M.S. in Teaching, Learning and Curriculum program.

Required Courses	15.0 Credits
MTED 501 Proportional and Algebraic Reasoning	3.0
MTED 502 Geometry and Geometric Reasoning	3.0
MTED 503 Data Analysis and Probabilistic and Statistical Reasoning	3.0
MTED 601 Diagnosing Student Mathematical Thinking	3.0
MTED 621 Collaborative Instructional Design and Analysis I	3.0

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School Principal Certificate

The School Principal Certification was designed to produce school leaders who are knowledgeable about current theories and strategies in leadership and change. Components of the program's conceptual bedrock are heuristic diagnostic learning, intelligent use of emotions in interpersonal skills of leadership, creative problem solving, and learning technologies.

The School Superintendent (Letter of Eligibility) available at the PhD level was designed to offer future school district leaders current research-based knowledge in creative instructional, community, and technological leadership.

Admission Requirements

Applicants come from a variety of undergraduate and graduate backgrounds and typically desire to provide leadership for change as a school principal. The School Principal Certification is available for teachers who already possess initial teaching certificates and requires a minimum of five years of appropriate teaching experience.

Applicants interested in School Principal Certification must interview with the director of the Leadership and Change area of studies in the School of Education. During the interview, the applicant's transcripts and life experiences are evaluated in relation to Pennsylvania state standards for the specific certification area. If coursework is dated, a content exam or additional coursework may be required. Specific content courses are generally not required for students working toward School Principal certification. Applicants must meet the general admissions requirements for graduate studies at Drexel University.

Program Requirements

Students will not be recommended for the School Principal Certificate until all course requirements are met, initial teaching certificate has been received, and all required sections of the Praxis Exams have been taken, and five years of satisfactory professional school experience have been completed. Minimum coursework requirements for the School Principal Certificate include 21-32 credits of specific pedagogy as outlined below. These credits may be incorporated into the graduate Science of Instruction program or into the electives portion of another approved Drexel master's degree program. Students must achieve the grade of B or better in each graduate level course needed for certification and receive passing Praxis Exam scores in order to satisfy requirements for the desired certification.

Core Courses for School Principal Track

At a minimum, 33 credits will be required from the core courses. (A minimum of 22 credits is required for students not wishing to build the School Principal Certificate into the master's degree program.)

School Principal Courses	Credits
EDUC 522 Evaluation of Instruction*	4.0
EDUC 523 Diagnostic Teaching*	4.0
EDUC 525 Multi-Media in Instructional Design*	3.0
EDUC 702 School Leadership and Decision Making	3.0
EDUC 705 School Law and Politics	3.0
EDUC 708 Managing Integration of Technology in School Setting	3.0
EDUC 710 School Finance and Facilities	3.0
EDUC 712 School and Community Relations and Partnerships	3.0
EDUC 714 Instructional and Curriculum Leadership	3.0
EDUC 715 School Principal Internship: Technology	1.0
EDUC 716 School Principal Internship: Finance/Facility	1.0
EDUC 717 School Principal Internship: Leadership	1.0
EDUC 718 School Principal Internship: Community Relations	1.0

* Not required for students who pursue the School Principal Certificate without working toward the master's degree.

Students working toward School Principal Certification engage in a corresponding one-credit school-based internship when enrolled in EDUC 708, EDUC 710, EDUC 712, and EDUC 714, related to each course's content.

Students who possess a valid Pennsylvania Instructional I or II Teaching Certificate and have completed a minimum of five years of satisfactory professional school experience upon successful completion of these core courses, and who also meet the current state minimum score on the Praxis Exam entitled, School Leaders License Assessment (Principal), may apply for School Principal Certification and continue working toward the master's degree requirements.

Master of Science Degree Requirements

Once students complete the 33 core credits for the School Principal certification, an additional 12 credits of Professional electives are necessary to finish the Master of Science, Science of Instruction degree.

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School Superintendent Certificate

Qualified students in the Educational Leadership Development and Learning Technologies program can include the School Superintendent Certificate as part of their Ph.D. degree. Students select the following courses to serve as the professional elective component of their degree requirements.

School Superintendent Courses	Credits
EDUC 801 Creative Strategies for Educational Leaders*	3.0
EDUC 813 Educational Issues*	3.0
EDUC 817 Curriculum Models**	3.0
EDUC 820 School Superintendency	3.0
EDUC 824 Parents and Schools	3.0
EDUC 827 School Superintendency Internship I - Curriculum Models	1.0
EDUC 828 School Superintendency Internship II - Parents and Schools	1.0
EDUC 829 School Superintendency Internship III ***	1.0
EDUC 830 School Superintendency Internship IV ***	1.0

* All Ph.D. students take these courses as part of the regular Ph.D. program.

** Course may be taken by any interested student in Ph.D. program.

*** EDUC 829 and EDUC 830 are one-year internships.

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Teaching English as a Second Language

Teaching English as a second language certification is an add-on certificate available to students that currently possess a Pennsylvania Instructional I or Instructional II teaching certificate. The 12-credit ESL certificate program covers the theory and practice of second language education, the structure and sound of English, the design and assessment of ESL course materials, as well as broader issues in intercultural learning. It does not require that the instructor speak another language. Credits earned through this program may be applied toward the [M.S. in the Science of Instruction](#).

This program satisfies PA State of Education requirements for certification in English as a second language. Interstate agreements generally allow applicability across the US. However, prospective students outside of Pennsylvania are advised to check with their state authorities to determine whether this program is appropriate for their case.

Courses		Credits
EDUC 602	Language Learning and Teaching	3.0
EDUC 604	Structure and Sound System of English	3.0
EDUC 606	Design and Assessment	3.0
EDUC 608	The Intercultural Learner	3.0