Drexel University
Catalog 2009/2010

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The Goodwin College of Professional Studies
School of Technology and Professional Studies

The mission of the School of Technology and Professional Studies is to provide contemporary students with the academic foundation and practical education that meets their career aspirations and facilitates their professional and personal advancement.

While still serving a large adult, part-time student population, the School has grown into a distinct entity that creates and delivers programs that are professional and applied in nature for both full-time traditional and nontraditional students. Today, the School offers full-time and part-time programs, credit and non-credit courses, classes during the day, evening, Saturdays, and online—as well as programs designed to suit the needs of the corporate sector.

The School also provides a range of continuing adult and professional education programs, certificates of proficiency, licensing and certification test preparation, and customer contracted training. The School abides by the continuing education unit (CEU) criteria for quality education.

All Goodwin programs are unique, aligning with market and industry needs, and blending theory with practice through laboratory experiments, field trips, and solid alliances with key businesses and industries. Instruction at Goodwin is supported by a team of educators with noteworthy educational credentials and expertise, and varied industrial background.

Degree requirements
Requirements for the School of Technology & Professional Studies degrees are provided by individual programs according to the requirements for each major, which are set forth in subsequent pages. The minimum number of credits required for the degree of Bachelor of Science varies from one program to another. All graduating students, regardless of the program, must have earned a grade point average of 2.0 or higher for all coursework undertaken at Drexel University.

Writing-Intensive Course Requirements
In order to graduate, all students beginning with the entering class of 2002/01 (fall, 2002) must pass three writing-intensive courses after their freshman year. Two writing-intensive courses must be in a student's major. The third can be in any discipline. Students are advised to take one writing-intensive class each year, beginning with the sophomore year, and to avoid “clustering” these courses near the end of their matriculation. Transfer students need to meet with an academic advisor to review the number of writing-intensive courses required to graduate.

A "WI" next to a course in this catalog indicates that this course can fulfill a writing-intensive requirement. Departments will designate specific sections of such courses as writing-intensive. Sections of writing-intensive courses are not indicated in this catalog. Students should check the section comments in Banner when registering. Students scheduling their courses in Banner can also conduct a search for courses with the attribute "WI" to bring up a list of all writing-intensive courses available that term. For more information on writing-intensive courses, see the Drexel University Writing Program's Writing-Intensive Course page.

Construction Management

Program Goals
The program is designed to increase the students' breadth and depth of knowledge in the principles and practices of construction management. The program serves as an excellent platform to develop senior management for the region's construction industry.

Graduates of the Master of Science in Construction Management will:

- exhibit strong technical and managerial skills
- apply scientific methodologies to problem solving
- think critically
- exercise creativity and inject innovation into the process
- operate at the highest level of ethical practice
- employ principles of transformational leadership

Concentrations
Three concentrations are available:

Construction Management Project Management
This concentration provides the knowledge and skills required to successfully manage complex construction projects. Topics include he hard skills of project management, such as estimating and budgeting, time management, and planning. Other topics include managerial and legal aspects of construction contract administration, international construction practices,strategic planning, quality management, and productivity analysis.

Real Estate
In this concentration students explore the knowledge and skills required to create, maintain, and build environments for living, working and entertainment purposes. Relevant issues include project finance, real estate as investments, design and construction, operations, development law, environmental remediation, public policy, market analysis, and architecture.

Sustainability and Green Construction
Sustainable development means integrating the decision-making process across the project team, so that every decision is made with an eye to the greatest long-term benefits. Currently, in the Leadership in Energy and Environmental Design (LEED) green building rating system, the construction process represents a significant portion of the effort required to achieve high performance building programs.This concentration is intended to explore these concepts in detail.

For additional information, view the Goodwin College of Professional Studies' Construction Management page.

Master of Science in Construction Management

Admissions Requirements

Admission to the program requires:

- A bachelor's degree in construction management or engineering, or a baccalaureate business or non-technical degree.
- A completed application
- Official transcripts from all universities or colleges and other post-secondary educational institutions (including trade schools) attended. Potential students must supply transcripts regardless of the number of credits earned or the type of school attended. If a potential student does not list all post-secondary institutions on his or her application, and these are listed on transcripts received from other institutions, processing of the application will be delayed until the remaining transcripts have been submitted.
- Two letters of recommendation (professional or academic)
- Up-to-date resume
- 500 word essay on why the applicant wishes to pursue graduate studies in this program
- International Students must submit a TOEFL score indicating a minimum of 600 (paper exam) or 250 (CBT exam). For more information, view the International Students page.

Visit the Admissions site for more information and to apply online.

Master of Science in Construction Management

45.0 credits

The Master of Science in Construction Management degree requires completion of 45 credit hours (quarter) of study. The curriculum includes a core of 5 required courses (15 credits), a concentration, and 6 credits of culminating experience. The culminating experience includes a capstone project in construction management.

Curriculum

Core Foundation Courses		**15.0 Credits**
CMGT 501	**Leadership in Construction**	3.0
CMGT 505	**Construction Accounting and Financial Management**	3.0
CMGT 510	**Construction Control Techniques**	3.0
CMGT 512	**Cost Estimating and Bidding Strategies**	3.0
CMGT 515	**Risk Management in Construction**	3.0

Students pursue a concentration in one of the following areas:

Construction Management Project Management Concentration		**24.0 Credits**
CMGT 525	**Applied Construction Project Management**	3.0
CMGT 528	**Construction Contract Administration**	3.0
CMGT 530	**Equipment Applications and Economics**	3.0
CMGT 532	**International Construction Practices**	3.0
CMGT 538	**Strategic Planning in Construction**	3.0
CMGT 540	**Schedule Impact Analysis**	3.0
CMGT 548	**Quality Management & Construction Performance**	3.0
CMGT 550	**Productivity Analysis and Improvement**	3.0

Real Estate Concentration		**24.0 Credits**
Students select any eight (8) of the following courses:		
CMGT 535	**Community Impact Analysis**	3.0
REAL 568	**Real Estate Development**	3.0
REAL 571	**Advanced Real Estate Investment and Analysis**	3.0
REAL 572	**Advanced Market Research and Analysis**	3.0
REAL 573	**Sales and Marketing of Real Estate**	3.0
REAL 574	**Real Estate Economics in Urban Markets**	3.0
REAL 575	**Real Estate Finance**	3.0
REAL 576	**Real Estate Valuation and Analysis**	3.0
REAL 577	**Legal Issues in Real Estate Development**	3.0

Sustainability and Green Construction Concentration **15.0 Credits**

For the concentration in Sustainability and Green Construction students must take the following five courses. Students also select three (3) additional graduate level

courses totaling nine (9) credits to complete their MSCM requirements. Graduate CMGT and REAL courses are acceptable selections. CMGT 538, CMGT 548, and REAL 568 are suggested but not mandatory. With permission and space permitting, students may also choose graduate courses in areas of specific related study from Environmental Engineering (ENVE), Environmental Science (ENVS), Property Management (PRMT).

CMGT 535	**Community Impact Analysis**	3.0
CMGT 545	**Sustainable Principles & Practices**	3.0
CMGT 546	**Sustainable Technologies**	3.0
CMGT 547	**LEED Concepts**	3.0
CMGT 558	**Community Sustainability**	3.0

Culminating experience		**6.0 Credits**
CMGT 695	**Capstone Project in Construction Management**	6.0

Certificate in Construction Management

18.0 credits

The Certificate in Construction Management has been designed for professionals to develop the multidisciplinary skills required of effective construction managers.

Students have the option of completing this 18-credit certificate in Construction Management as a stand-alone professional development credential, or as a step toward the MS in Construction Management.

The admissions process for this program is the same as for the MS in Construction Management.

Depending on the experience and background of individual students, a prerequisite course of CMGT 510 "Leadership in Construction" may be required, or, at the discretion of the faculty, can be waived.

Requirements		18.0 Credits
CMGT 510	**Construction Control Techniques**	3.0
CMGT 512	**Cost Estimating and Bidding Strategies**	3.0
CMGT 515	**Risk Management in Construction**	3.0
CMGT 525	**Applied Construction Project Management**	3.0
CMGT 528	**Construction Contract Administration**	3.0
CMGT 538	**Strategic Planning in Construction**	3.0

Certificate in Real Estate

18.0 credits

This graduate certificate seeks to produce professionals with the knowledge, skills, and perspective required to be successful in the real estate development process and the industry as a whole. Students explore the knowledge and skills required to create, maintain, and build environments for living, working and entertainment purposes.

Relevant issues include project finance, real estate as investments, design and construction, operations, development law, environmental remediation, public policy, market analysis, and architecture.

Students wising to complete this certificate in the context of a master's degree should consider the MS in Construction Management with a concentration in Real Estate.

Requirements		**15.0 Credits**
REAL 568	**Real Estate Development**	3.0
REAL 571	**Advanced Real Estate Investment and Analysis**	3.0
REAL 572	**Advanced Market Research and Analysis**	3.0
REAL 575	**Real Estate Finance**	3.0
REAL 577	**Legal Issues in Real Estate Development**	3.0

Students select one (1) additional credits from the following:		**3.0 Credits**
REAL 573	**Sales and Marketing of Real Estate**	3.0
REAL 574	**Real Estate Economics in Urban Markets**	3.0
REAL 576	**Real Estate Valuation and Analysis**	3.0

Certificate in Sustainability and Green Construction

15.0 credits

The architectural, engineering, and construction community faces the daunting task of providing a built environment which is in harmony with the natural environment—meeting the current needs of society without jeopardizing the ability of future generations to meet their needs. Sustainable development means integrating the decision-making process across the project team, so that every decision is made with an eye to the greatest long-term benefits.

The Certificate in Sustainability and Green Construction is a flexible, part-time post-baccalaureate program, focused on the sustainable aspects of the construction process. Students have the opportunity to complete all requirements within one and a half years.

Currently, in the Leadership in Energy and Environmental Design (LEED) green building rating system, the construction process represents a significant portion of the effort required to achieve high performance building programs.This certificate program is intended to explore these concepts in detail. Credits from this certificate will transfer toward a Masters of Science in Construction Management.

Requirements		**15.0 Credits**
CMGT 535	**Community Impact Analysis**	3.0
CMGT 545	**Sustainable Principles & Practices**	3.0
CMGT 546	**Sustainable Technologies**	3.0
CMGT 547	**LEED Concepts**	3.0
CMGT 558	**Community Sustainability**	3.0

Engineering Technology

The primary goal of the Master of Science in Engineering Technology is to develop advanced-level practitioners in resolving technical problems through the application of engineering principles and technology.

The program can be pursued in either a full- or part-time basis and permits students to select a combination of courses relevant to individual career goals in technology. The program has also been designed to provide the foundation for further advanced study and allows practicing professionals the opportunity to update knowledge and skills based on the latest technological developments in the industrial environment and therefore advance in their chosen careers.

Program Goals
Graduates of the Master of Science in Engineering Technology will be expected to:

- Apply scientific and technological concepts to solving technological problems.
- Apply concepts and skills developed in a variety of technical and professional disciplines including computer applications and networking, materials properties and production processes, and quality control to improve production processes and techniques.
- Plan, facilitate, and integrate technology and problem solving techniques in the leadership functions of the industrial enterprise system.
- Engage in applied technical research in order to add to the knowledge of the discipline and to solve problems in an industrial environment.
- Apply theories, concepts, and principles of related disciplines to develop the communication skills required for technical-managers.

For additional information, view the Goodwin College of Professional Studies' Engineering Technology program web page.

MS in Engineering Technology

Admission requirements
Applicants must have a 3.0 grade point average in their undergraduate or upper division (junior and senior year) coursework.

International students who have their undergraduate degree from a country whose language is not English can be admitted with a Test of English as a Foreign Language (TOEFL) test score of 550 or better.

In addition to the general Drexel graduate admission requirements applicants must provide a preliminary proposal of their intended plan of study, which should include a general set of objectives, an outline of the courses to be taken, and identification of a master's project topic to be pursued.

Prerequisite courses , The following prerequisite courses must be completed at the undergraduate level with a minimum grade of C:

1. Calculus 1
2. Calculus 2
3. Physics 1 (algebra-based)
4. Physics 2 (algebra-based)
5. DC/AC Circuit Analysis
6. Digital Electronics
7. Industrial Materials
8. Statistics

Visit the Admissions site for more information and to apply online.

Master of Science in Engineering Technology

45.0 credits

Program requirements

Candidates for the MS in Engineering Technology must complete a minimum of 45.0 quarter credits. A minimum grade of B is required in all core courses and no more than two C grades in electives.

Of the 45.0 quarter credits required for the degree, 30.0 must be earned at Drexel University, including 24.0 credits of Engineering Technology (ET) courses. A maximum of 15.0 transfer credits may be allowed for graduate courses taken at other institutions, if they are appropriate to the student's plan of study.

Curriculum

Core Courses		**27.0 Credits**
ET 605	**Modern Materials**	3.0
ET 610	**Networks for Industrial Environment**	3.0
ET 615	**Rapid Prototyping**	3.0
ET 619	**Programmable Devices and Systems**	3.0
ET 620	**Microsystems and Microfabrication**	3.0
ET 725	**Sensors and Measurements**	3.0
ET 732	**Modern Energy Conversion Technologies**	3.0
PRST 503	**Ethics for Professionals**	3.0
PRST 504	**Research Methods and Statistics**	3.0

Electives		**9.0 Credits**
Students select 3 courses from the followings:		
ET 635	**Engineering Quality Methods**	3.0
ET 675	**Reliability Engineering**	3.0
ET 730	**Lean Manufacturing Principles**	3.0
ET 755	**Sustainable and Green Manufacturing**	3.0
PROJ 501	**Introduction to Project Management**	3.0
PRST 512	**Computing for Professionals**	3.0

Capstone Course		**9.0 Credits**
ET 695	**Master's Project/Thesis in Engineering Technology***	3.0

*Students repeat ET 695 for credit three times.

Master of Science in Food Science

The MS in Food Science program provides a science-based professional education that encompasses classroom theory, practical research, and application. Food science is concerned with foods, their ingredients, and their physicochemical and biochemical interactions at the molecular and cellular levels.

Graduate students in the food science program participate in the research enterprise by completing a research project or designing and executing a thesis under faculty direction. Current research in food science includes:

- Physicochemical changes during deep-fat frying
- Development of a biosensor for antioxidant capacity
- Development of reduced fat and reduced sodium products
- Descriptive sensory analysis of beverages
- Development of lexicons for flavor descriptive analysis

Opportunities

The MS in Food Science is designed for students who:

- are already working within the food industry and seeking professional advancement.
- have an undergraduate degree in a general science-related area such as biology or chemistry, and would like to change fields or move into the more specialized field of food science

The MS in Food Science offers students numerous opportunities for hands-on, real-world careers in applied science and technology. Potential employers include food product manufacturers, along with other companies providing services related to institutional feeding or supplying ingredients, processing equipment, and packaging materials. Technical and administrative positions are also available in various government agencies and with independent testing laboratories.

Food scientists are needed in the areas of:

- Food quality assessment and management
- Food processing and engineering
- Food product research and development
- Marketing and distribution
- Technical sales and support

For additional information, view the Goodwin College of Professional Studies' Master of Science in Food Science web page.

Master of Science in Food Science

Admissions Requirements

The MS in Food Science program's approach to graduate study is quantitative; therefore, applicants are expected to demonstrate competency in the coursework or its equivalent listed in the following table. The graduate committee evaluates each applicant's transcripts at the time of application. In some cases, courses listed as prerequisites may be taken as corequisites during the first year of graduate study if deemed appropriate by the graduate admissions committee.

- general chemistry: one year
- organic chemistry: two terms or semesters
- biochemistry: one or two terms or semesters
- general biology: two courses to include genetics
- microbiology: one course
- mathematics: one year to include calculus
- statistics: one course
- physics: two terms or semesters

Visit the Admissions site for more information and to apply online.

Master of Science in Food Science

45 post-baccalaureate credits

Required courses		**30.0 Credits**
BIO 610	**Biochemistry II**	3.0
BIO 641	**Data Analysis in the Biosciences**	3.0
FDSC 506	**Food Composition and Behavior**	3.0
FDSC 550	**Food Microbiology**	3.0
FDSC 551	**Food Microbiology Laboratory**	2.0
FDSC 560	**Advanced Food Chemistry**	3.0
FDSC 556	**Food Preservation Process**	3.0
FDSC 669	**Readings in Food Science**	3.0
FDSC 890	**Seminar in Food Science**	1.0
NFS 530	**Macronutrient Metabolism**	3.0
NFS 601	**Research Methods in Applied Nutrition**	3.0
	Electives*	15.0

*Electives are selected from departmental or related course offerings in consultation with the student's graduate advisor. Possibilities include courses in various aspects of nutrition; special topics in food science such as taste and odor and organoleptic evaluation; microbial physiology; microbial genetics; recombinant DNA techniques; chemical instrumentation; biochemistry; sanitary microbiology; toxicology; and environmental sciences. Students electing the thesis option may include up to six credits of FDSC 997 (Research in Food Science) among their electives.

Research

Students are invited to participate in research by designing and completing a research project or thesis. All thesis students consult with a faculty advisor and prepare a research proposal. Students present their proposals to their thesis committee for approval and, at the prerogative of the faculty, complete the research and report on it in seminar presentations. Students may elect to work in ongoing research or in some cases may suggest a new research area of specific interest to them. Individual guidance is necessary before research can commence, and there is periodic review during the course of the work. Students must submit a final written thesis to their thesis committee and defend the thesis at a final oral examination. Students in the thesis option may include up to six credits of FDSC 997, Research in Food Science, among their electives.

Students in the non-thesis option may include up to three credits of FDSC 997, Research in Food Science, among their electives.

Hospitality Management

Both at the national and international level, travel and hospitality have become primary industries that require increasing numbers of professionals at all skill levels. Additional educational opportunities at the graduate level will be required to fill the needs of the tourism industry. Top professionals with an MS degree have excellent prospects at home and in the global marketplace.

Drexel University has a professional and technological emphasis as well as a track record of supporting the relationship between academics and industry. The Master of Science degree in Hospitality Management is designed to prepare graduates to be key decision makers in the hospitality industry.

This two-year online master’s degree will include courses such as program planning and creativity as well as specialized preparation in a concentration of either Tourism or Gaming and Casino Management.

For additional information, visit the College's Master of Science in Hospitality Management page.

Hospitality Management

Admission requirements
Classes start in the Fall and Spring terms. Applications are submitted throughout the year. Admission requirements include:

- a completed application form
- a Bachelor's degree from an accredited institution
- an undergraduate GPA of 3.0 or higher (graduate degree GPAs will be considered along with the undergraduate GPA)
- official transcripts from all universities or colleges and other post-secondary educational institutions (including trade schools) attended.
  Applicants must supply transcripts regardless of the number of credits earned or the type of school attended. If an applicant does not list all post-secondary institutions on the application and these are listed on transcripts received from other institutions, processing of the application will be delayed until the remaining transcripts have been submitted.
- two letters of recommendation
- a personal essay
- a resume
- International students must submit a TOEFL score of 550 or higher. For more information regarding international applicant requirements, view the International Students page.

Visit the Admissions site to apply online. Or, for additional questions, contact the MS in Hospitality Management program advisor: Dr. Joseph Lema, 215.895.0955.

Master of Science in Hospitality Management

45.0 credits

The Master of Science in Hospitality Management requires completion of 45.0 credit hours (quarter) of study. The curriculum includes a core of 11 required courses (33.0 credits), including a research course where students consult with a faculty advisor to identify a suitable problem area in hospitality management and develop and carry out appropriate methodology to address the problem. In addition students take 12.0 credits in a concentration, either Global Tourism or Gaming and Casino Management.

Curriculum

Goodwin College of Professional Studies Core Courses		**12.0 Credits**
CRTV 501	**Foundations in Creativity**	3.0
PROJ 501	**Introduction to Project Management**	3.0
PRST 503	**Ethics for Professionals**	3.0
PRST 504	**Research Methods and Statistics**	3.0

Hospitality Management Required Courses		**21.0 Credits**
HRM 501	**Foundations of the Hospitality Industry**	3.0
HRM 505	**Customer Service for Professionals**	3.0
HRM 520	**Hospitality Information Systems**	3.0
HRM 555	**Hospitality Human Resource Management**	3.0
HRM 650	**Strategic Management and Leadership in Hospitality**	3.0
HRM 997	**Research Project in Hospitality Management**	3.0

Concentrations

Students select a concentrations in either Global Tourism or Gaming and Casino Management

Global Tourism		**12.0 Credits**
Students select four (4) of the following courses:		
HRM 515	**Destination and Resort Management**	3.0
HRM 595	**Economics and Social Dynamics of Tourism**	3.0
HRM 610	**The Global Tourism System**	3.0
HRM 612	**Tourism and Sustainability**	3.0
HRM 614	**Tourism Development**	3.0
HRM 616	**Tourism Marketing and Branding**	3.0

Gaming and Casino Management		**12.0**

		Credits
Students select four (4) of the following courses:		
HRM 515	**Destination and Resort Management**	3.0
HRM 572	**Gaming Information Systems**	3.0
HRM 575	**Current Issues in Gaming**	3.0
HRM 670	**Casino Financial Analysis**	3.0
HRM 672	**Casino Security**	3.0
HRM 674	**Tribal Gaming Management**	3.0
HRM 676	**Casino Marketing**	3.0

Certificate in Gaming and Casino Operations

18.0 credits

The graduate-level certificate in Gaming and Casino Operations provides individuals interested in higher-level management positions in the casino industry with an in-depth understanding of the unique aspects of gaming and resort management. This certificate focuses on the knowledge, skills, and abilities necessary to become a competent executive in a casino resort.

This part-time program is designed for people interested in a career in the casino industry or for existing casino employees looking to advance to higher levels of management. The certificate is delivered online and can be obtained within one year by taking two courses at a time for three terms or within two years by taking one course at a time for six terms.

For more information, visit Drexel Online's Graduate Certificate in Gaming and Casino Operations web page.

Required Pre-requisite Courses		
HRM 110	**Introduction to the Hospitality Industry**	3.0
HRM 310	**Hospitality Accounting Systems**	3.0
or		
HRM 325	**Hotels Rooms Division Management**	3.0
MATH 101	**Introduction to Analysis I**	4.0
or		
MATH 181	**Mathematical Analysis I**	3.0

Requirements		**18.0 Credits**
HRM 335	**Beverage Management**	3.0
HRM 370	**Gaming and Casino Management I**	3.0
HRM 371	**Gaming and Casino Management II**	3.0
HRM 470	**Gaming Legislation, Policy and Law**	3.0
HRM 472	**Gaming Information Systems**	3.0
HRM 475	**Current Issues in Gaming**	3.0

Professional Studies

The Master of Science in professional Studies is designed for individuals and practitioners with established career paths who are interested in developing marketable skills to meet evolving workforce demands; seeking professional development; and expanding promotional opportunities.

The degree contains a common core of knowledge and skills relevant for 21st century professionals in nearly every field. The degree also will provide knowledge and skills for immediate application in three important professional fields of study:

- **Creativity Studies Concentration**
  Students will form an in depth understanding of creativity, enhanced communication, and creative problem solving, while learning how these may be applied to practical situations that further workplace culture of creativity.
- **E-Learning Leadership Concentration**
  Students will acquire knowledge of online and distance learning leadership theory and practice in emerging information and communication technologies, multimedia pedagogical strategies, and e-learning design and delivery.
- **Homeland Security Management Concentration**
  Students will develop competencies relating to homeland security strategy and policy development, national security issues in terrorism, critical infrastructure protection, intelligence, land and maritime border and port protection, and developing technologies in homeland security.

Courses will be offered in the fall, winter, spring, and summer, allowing students an opportunity to complete all degree requirements within two years.

For additional information, visit the Master of Science in Professional Studies page.

Professional Studies

Admission requirements
Classes start in the Fall and Spring terms. Applications are submitted throughout the year. Admission requirements include:

- a completed application form
- a Bachelor's degree from an accredited institution
- an undergraduate GPA of 3.0 or higher (graduate degree GPAs will be considered along with the undergraduate GPA)
- official transcripts from all universities or colleges and other post-secondary educational institutions (including trade schools) attended.
  Applicants must supply transcripts regardless of the number of credits earned or the type of school attended. If an applicant does not list all post-secondary institutions on the application and these are listed on transcripts received from other institutions, processing of the application will be delayed until the remaining transcripts have been submitted.
- two letters of recommendation
- a personal essay
- a resume
- International students must submit a TOEFL score of 550 or higher. For more information regarding international applicant requirements, view the International Students page.

Visit the Admissions site for more information and to apply online.

Master of Science in Professional Studies

45.0 credits

The Master of Science in Project Studies requires completion of 45 credit hours (quarter)of study. The curriculum includes a core of 6 required courses (18.0 credits), 6 courses in an area of concentration (18.0 credits), a culminating capstone integrating the knowledge and skills acquired during the program (6.0 credits) and 3.0 credits of electives.

Curriculum

Core Courses		**18.0 Credits**
PRST 501	**Communication for Professionals**	3.0
PRST 503	**Ethics for Professionals**	3.0
PRST 504	**Research Methods and Statistics**	3.0
PRST 512	**Computing for Professionals**	3.0
PRST 515	**Program Evaluation**	3.0
PROJ 501	**Introduction to Project Management**	3.0

Creativity Concentration		**18.0 Credits**
CRTV 501	**Foundations in Creativity**	3.0
CRTV 502	**Tools and Techniques in Creativity**	3.0
CRTV 503	**Creativity in the Workplace**	3.0
CRTV 610	**Creativity and Change Leadership**	3.0
CRTV 620	**Research and Assessment of Creativity**	3.0
CRTV 630	**Global Perspectives on Creativity**	3.0

E-Learning Leadership Concentration		**18.0 Credits**
ELL 501	**Purpose/Business of E-Learning**	3.0
ELL 502	**E-Learning Technologies**	3.0
ELL 503	**Teaching/Learning Issues in E-Learning**	3.0
ELL 504	**Learning Technology and Disabilities**	3.0
ELL 604	**Design/ Delivery/Management of E-Learning I**	3.0
ELL 605	**Design/Delivery/Management of E-Learning II**	3.0

Homeland Security Management Concentration		**18.0 Credits**
HSM 544	**Introduction to Homeland Security**	3.0
HSM 549	**Terrorism and Homeland Security**	3.0

HSM 554	**Critical Infrastructure Protection**	3.0
CST 604	**Technology for Homeland Security**	3.0
CST 609	**National Security Intelligence**	3.0
CST 614	**Counterintelligence**	3.0

Electives **3.0 Credits**

Students select one of the following electives:

HSM 644	**Public Management in Crisis**	3.0
HSM 645	**Emergency Incident Risk Management**	3.0
PRST 640	**Policy Analysis**	3.0
PRST 644	**Communicating in Virtual Teams**	3.0

Capstone project **6.0 Credits**

Students select one of the following sequences:

CRTV 695	**Applied Project in Creativity I**	3.0
CRTV 696	**Applied Project in Creativity II**	3.0
ELL 695	**Applied Project in ELL I**	3.0
ELL 696	**Applied Project in ELL II**	3.0
HSM 695	**Applied Project in HSM I**	3.0
HSM 696	**Applied Project in HSM II**	3.0

Graduate Certificate in Creativity Studies

18.0 Credits

The certificate in Creative Studies provides, in a concentrated format, the most contemporary knowledge and skills needed in this important area for students who do not wish to pursue a master's degree but who would value a credential that demonstrates their learning.

Credits from the Graduate Certificate in Creativity Studies can be applied toward an MS in Professional Studies.

In a world of increasing complexity, change, and competition, generating new ideas and bringing them to the table is now essential for corporate management. Creativity is multidisciplinary – it is in all professional fields from chemistry to engineering, from education to computer science, and from sociology to business. Successful organizations, in all fields, view creativity as vital and are the ones that instill creativity throughout the organization. The application of creativity skills distinguishes managers who maintain the status quo from leaders who inspire a new direction or vision. By internalizing the spirit of creativity and the principles of creative problem solving, individuals can be transformed into change leaders.

Objectives

Upon completion of the certificate program, students will have formed an in depth understanding of creativity, enhanced communication, creative problem solving, and how these may be applied to practical situations that further their workplace culture. Participants will use their newly enhanced creative thinking skills to reflect critically on existing workplace practices and express coherent and cogent ideas and suggestions for continuous improvement.

Specific outcomes include the following:

- Students will form a body of knowledge of leading creativity researchers and their theories, specifically Sternberg, Torrance, Amabile, Csikszentmihalyi, Guilford, and Gardner
- Students will develop skills in problem solving and how these may be applied to practical situations
- become aware of ways to enhance one’s own and others’ creative strengths

For more information, visit Drexel Online's Graduate Certificate Creativity Studies web page.

Requirements		**18.0 Credits**
CRTV 501	**Foundations in Creativity**	3.0
CRTV 502	**Tools and Techniques in Creativity**	3.0
CRTV 503	**Creativity in the Workplace**	3.0
CRTV 610	**Creativity and Change Leadership**	3.0
CRTV 620	**Research and Assessment of Creativity**	3.0
CRTV 630	**Global Perspectives on Creativity**	3.0

Certificate in E-Learning Leadership

18.0 credits

The graduate certificate in E-Learning Leadership is designed to meet the needs of today's working professionals across many fields. As the demand for academic programs and courses to be delivered via e-learning continues to grow, the corresponding need for leadership in this important area increases. Similarly, corporations continue to seek leaders to oversee training and development initiatives via e-learning. This certificate provides, in a concentrated format, the most contemporary knowledge and skills needed in this important area for students who do not wish to pursue a master's degree but who would value a credential that demonstrates their learning.

Credits from the Graduate Certificate in e-Learning Leadership can be applied toward an MS in Professional Studies.

Objectives

Upon completion of the program, students will have formed an in-depth understanding of online and distance learning theories and will be able to answer the following paramount questions:

- Which emerging technologies hold greatest promise for enriching learning experiences throughout the educational enterprise?
- What pedagogical strategies should designers embody in instructional materials,including those based on multimedia and those reflected in gaming environments?
- How should educators deploy, manage, and evaluate information and communication technologies in classrooms for optimal educational effect?
- What principles of design and practice should educators incorporate into distributed educational courses and programs?

For more information, visit Drexel Online's Graduate Certificate in E-Learning web page.

Requirements		**18.0 Credits**
ELL 501	**Purpose/ Business of E-Learning**	3.0
ELL 502	**E-Learning Technologies**	3.0
ELL 503	**Teaching/Learning issues in E-Learning**	3.0
ELL 504	**Learning Technology and Disabilities**	3.0
ELL 604	**Design/Delivery/Management of E-Learning I**	3.0
ELL 605	**Design/Delivery/Management of E-Learning II**	3.0

Certificate in Homeland Security Management

18.0 credits

The graduate certificate in Homeland Security Management seeks to produce professionals practicing in the defense and security of the homeland in both the public and private sectors. This online program has been designed for employees of federal, state, and municipal government, especially those involved in law enforcement, facilities, emergency medical personnel, fire personnel, and concerned citizens. Prospective graduate students at Drexel who may be interested in courses in this program include those studying construction management, architecture, and engineering (all disciplines).

This certificate provides, in a concentrated format, the most contemporary knowledge and skills needed in this important area for students who do not wish to pursue a master's degree, but who would value a credential that demonstrates their learning. Credits from the Graduate Certificate in Homeland Security Management can be applied toward an MS in Professional Studies.

Objectives
Students in this certificate program will develop competencies and knowledge relating to:

- homeland security strategy and policy development
- national security issues in terrorism
- critical infrastructure protection
- national security intelligence
- land and maritime border and port protection
- developing technologies in homeland security

Specifically, graduates of this program will be able to:

- Design and modify plans and programs at federal, state, and/or local levels to reflect the evolving strategic policy issues associated with a statutory and presidential direction for homeland security.
- Recognize terrorist groups' proclivities in order to forecast the risks, types, and orders of magnitude of terrorist threats most likely to confront the nation-state.
- Develop policies, procedures, and protocols to allow seamless agency integration from prevention to incident response scenarios.
- Recognize the multidisciplinary nature of homeland security functions and be able to assess and integrate various functional areas.

For more information, visit Drexel Online's Graduate Certificate Homeland Security Management web page.

Requirements		**18.0 Credits**
HSM 544	**Introduction to Homeland Security**	3.0
HSM 549	**Terrorism and Homeland Security**	3.0
HSM 554	**Critical Infrastructure Protect**	3.0
CST 604	**Technology and Homeland Security**	3.0
CST 609	**Intelligence**	3.0

Project Management

Project Management is a field that began in the 1950s in the defense industry. In the 1980s, the field gained critical mass in a broad range of industries, including, but not limited to building/construction, defense, engineering, film and video, financial services, government contracting, and IT/software development. Most environments today are “projectized.” In other words, there is a project approach to getting things done. Today's companies use project management (tied to their core competencies) to gain competitive advantage.

The Master of Science in Project Management will lead to the Project Management Institute’s (PMI) internationally recognized Certified Project Management Professional (PMP) designation, a credential that captures the attention of employment recruiters.

For additional information, visit the Master of Science in Project Management page.

Project Management

Recommended Prerequisites
The following undergraduate courses or their equivalent are recommended prior to enrolling in the MS in Project Mangement program:

ACCT 115	**Financial Accounting Foundations**	4.0
STAT 201	**Statistics I**	4.0
FIN 301	**Introduction to Finance**	4.0
ORGB 300 WI	**Organizational Behavior**	4.0

Admission requirements
Classes start in the Fall and Spring terms. Applications are submitted throughout the year. Admission requirements include:

- a completed application form
- a Bachelor's degree from an accredited institution
- an undergraduate GPA of 3.0 or higher (graduate degree GPAs will be considered along with the undergraduate GPA)
- official transcripts from all universities or colleges and other post-secondary educational institutions (including trade schools) attended. Applicants must supply transcripts regardless of the number of credits earned or the type of school attended. If an applicant does not list all post-secondary institutions on the application and these are listed on transcripts received from other institutions, processing of the application will be delayed until the remaining transcripts have been submitted.
- two letters of recommendation
- a personal essay
- a resume
- International students must submit a TOEFL score of 550 or higher. For more information regarding international applicant requirements, view the International Students page.

Visit the Admissions site for more information and to apply online.

Master of Science in Project Management

45.0 credits

The Master of Science in Project Management requires completion of 45 credit hours (quarter) of study. The curriculum includes a core of 9 required courses (27 credits), a culminating capstone project experience integrating the knowledge and skills acquired during the program (PROJ 695, 3.0 credits) and 15.0 credits of electives.

Recommended Prerequisites

The following undergraduate courses or their equivalent are recommended:

ACCT 115	**Financial Accounting Foundations**	4.0
STAT 201	**Statistics I**	4.0
FIN 301	**Introduction to Finance**	4.0
ORGB 300 WI	**Organizational Behavior**	4.0

Electives

Students may use electives to increase project management, creativity, communication, or leadership skills or to develop areas of specialization. Any appropriate graduate course offered in the University can serve as an elective if the student has sufficient background to take the course. In addition, the program will offer its own elective courses including special topics (PROJ 690). Qualified students may also pursue independent study (PROJ 699) for elective credit in special cases.

Curriculum

Core Courses		**27.0 Credits**
PROJ 501	**Introduction to Project Management**	3.0
PROJ 502	**Project Planning and Scheduling**	3.0
PROJ 510	**Project Quality Management**	3.0
PROJ 515	**Project Estimation and Cost Management**	3.0
PROJ 520	**Project Risk Assessment and Management**	3.0
PROJ 525	**E-Tools for Project Management**	3.0
PROJ 530	**Managing Multiple Projects**	3.0
PROJ 535	**International Project Management**	3.0
PROJ 603	**Project Management Leadership**	3.0

Electives	**15.0 Credits**

Capstone project		**3.0 Credits**
PROJ 695	**Capstone Project in Project Management**	3.0

Property Management

Admission requirements
Applications are submitted throughout the year. Admission requirements include:

- a completed application form
- a Bachelor's degree from an accredited institution
- an undergraduate GPA of 3.0 or higher (graduate degree GPAs will be considered along with the undergraduate GPA)
- official transcripts from all universities or colleges and other post-secondary educational institutions (including trade schools) attended.
  Applicants must supply transcripts regardless of the number of credits earned or the type of school attended. If an applicant does not list all post-secondary institutions on the application and these are listed on transcripts received from other institutions, processing of the application will be delayed until the remaining transcripts have been submitted.
- two letters of recommendation (professional or academic)
- a 500 word essay explaining why the prospective student wishes to pursue graduate studies in this program
- an up-to-date resume
- International students must submit a TOEFL indicating a minimum of 600 (paper exam) or 250 (CBT exam). For more information regarding international applicant requirements, view the International Students page.

Visit the Admissions site for more information and to apply online.

Master of Science in Property Management

45.0 credits

The Master of Science in Property Management requires the completion of a minimum of 45.0 post-baccalaureate credits with 30.0 credits in core foundation courses. The core foundation courses include essential subject areas for all successful property managers: environment, facilities management, property law, financial analysis, risk management, development, and technology. In addition, the three premier types of property are featured: residential, commercial, and retail. Beyond the core foundation courses, students can select from a list of elective courses. All students participate in a capstone project which is the culminating experience of the degree program. Students discuss current issues facing the profession work together on a team project to complete an analysis project and have the opportunity to interact with internationally known property management leaders.

Curriculum

Core Courses		**30.0 Credits**
CMGT 535	**Environmental Impact Analysis and Planning**	3.0
PRMT 602	**Residential Property Marketing**	3.0
PRMT 603	**Property Asset Management**	3.0
PRMT 610	**Facilities Management**	3.0
PRMT 625	**Property Financial Analysis and Strategy**	3.0
PRMT 630	**Property Management Law**	3.0
PRMT 640	**Property Security, Emergency and Risk Management**	3.0
PRMT 645	**Property Management Technology Strategy**	3.0
REAL 568	**Real Estate Development**	3.0
REAL 572	**Advanced Market Research and Analysis**	3.0

Electives		**9.0 Credits**
Students select 3 courses from the followings:		
PRMT 650	**Retail Property Marketing and Management**	3.0
PRMT 655	**Affordable Housing Management**	3.0
PRMT 660	**Student Housing Marketing and Management**	3.0
PRMT 665	**Military Housing Marketing and Management**	3.0
PRMT 670	**Housing for Later Life**	3.0
PRMT 675	**Commercial Property Management**	3.0
REAL 574	**Real Estate Economics in Urban Markets**	3.0

Culminating Experience		**6.0 Credits**
PRMT 695	**Capstone Project in Property Management I**	3.0
PRMT 696	**Capstone Project in Property Management II**	3.0

Sport Management

The Master of Science in Sport Management prepares its graduates for positions in sport management at all levels (recreational, youth, inter-scholastic, amateur, collegiate, professional) and within several organizational settings (public, private, non-profit, corporations).

The program content provides an integrated educational experience directed toward developing the ability to apply knowledge and skills to the planning, design, implementation, and evaluation of sport programs and offer solutions to practical problems in the sport management field. Graduates are expected to be leaders in their chosen area of interest by incorporating the various perspectives from the multidisciplinary training and applying them to current issues in sport and society.

Program Goals
Graduates of the Master of Science in Sport Management will be able to:

- Apply the fundamentals of business to sport management.
- Integrate the principles of management; organizing people and resources to get results in the field of sport.
- Apply the area of law and labor relations to the sports industry and agency.
- Use existing technologies and be prepared for emerging technologies in the sport management field.
- Forecast new developments and adapt to the rapidly changing sports environment.
- Creatively direct the economic contributions that sports and recreation offer to people, organizations, and the community.
- Effectively organize, evaluate and improve and use new information in sports.
- Utilize the knowledge and skills learned to produce an in-depth research project or thesis, which will serve to advance the study of sport management.

For additional information, view the Goodwin College of Professional Studies' Sport Management program web page.

Master of Science in Sport Management

Admissions Requirements
All applicants must have received a four year bachelor's degree from an accredited college or university. Students whose native language is not English and who do not hold a bachelor's degree from a U.S. institution are required to take and submit a score from TOEFL (Test of English as a Foreign Language).

Students applying to the MS degree in Sport Management will be subject to both Drexel's graduate admissions requirements and those of the program, namely:

- Completed Application Form
- A recommended minimum of 3.0 out of 4.0 for the undergraduate degree
- TOEFL (if required) with a minimum score of 600
- All official transcripts verifying an earned baccalaureate degree from an accredited four year institution
- Two letters of recommendation (it is suggeseted that one be from a professional individual and one be from an academic individual). Letters of recommendation should be requested from individuals who are capable and prepared to make judgments on the applicant's ability to complete graduate studies.
- Professional Resume
- Interview with a member of the Sport Management Faculty (arranged by the Sport Management program)
- A 1000-word essay including a biographical sketch which should include information regarding the applicant's background and experience in the sports industry, a summary of his/her professional career interests and goals and personal strengths
- A recommended minimum of three years working experience since baccalaureate graduation
- Recommended prior experience (voluntary or paid) within the sport industry for those individuals whose undergraduate degree is not in sport management or an associated field.

Students may be admitted into the program on the basis of the above criteria, but if previous studies have not included core courses in sport management, they may be required to take prerequisite courses before being allowed to register for the graduate classes. These courses will be determined by the Director of the Sport Management Program.

Visit the Admissions site for more information and to apply online.

Master of Science in Sport Management

45.0 post-baccalaureate credits

Curriculum

Core Foundation Courses		**21.0 Credits**
SMT 601	**Sports Industry Management**	3.0
SMT 602	**Sport Law**	3.0
SMT 603	**Sports Marketing and Public Relations**	3.0
SMT 604	**Sport Media and Technology**	3.0
SMT 605	**Economic Issues in Sport**	3.0
SMT 606	**Contemporary Issues in Sport**	3.0
SMT 610	**Seminar on Sports Research**	3.0

Elective/Concentration Courses		**15.0 Credits**
Students select any five of the following courses:		
SMT 620	**Technology and the Sports Product**	3.0
SMT 621	**Leadership in Sport Management**	3.0
SMT 622	**Sports Agents and Labor Relations**	3.0
SMT 623	**Sports Facility Management**	3.0
SMT 624	**Sports Science for Sport Managers**	3.0
SMT 625	**Sport Promotions and Sales**	3.0
SMT 626	**Globalization of Sport**	3.0
SMT 627	**Sports Tournaments and Events**	3.0
SMT 628	**Coaching and Managing**	3.0
SMT 630	**Sports Industry Practicum**	3.0

Project/ Research Thesis		**9.0 Credits**
SMT 698	**Research Design and Techniques in Sport**	3.0
SMT 699	**Project/Research Thesis**	6.0

Master of Science Sport Management

45.0 credits

Sample Sequence

First Year

Fall		Credits
SMT 601	**Sports Industry Management**	3.0
SMT 602	**Sport Law**	3.0
	Total credits	6.0

Winter		
SMT 603	**Sport Management and Public Relations**	3.0
SMT 604	**Sport Media and Technology**	3.0
	Total credits	6.0

Spring		
SMT 605	**Economic Issues in Sport**	3.0
SMT 606	**Contemporary Issues in Sport**	3.0
	Total credits	6.0

Summer		
SMT 610	**Seminar in Sports Research (Summer Residency)**	3.0
	Total credits	3.0

Second Year

Fall		
	Two(2) Sport Management electives	6.0
	Total credits	6.0

Winter		
SMT 698	**Research Design and Techniques in Sport**	3.0
	One (1) Sport Management elective	3.0
	Total credits	6.0

Spring		
	Two (2) Sport Management electives	6.0
	Total credits	6.0