



MASTER OF PROFESSIONAL STUDIES AND
ADVANCED PROFESSIONAL CERTIFICATE IN

Technology Management





Welcome to Georgetown

2	Message from the Dean
3	Message from the Associate Dean
4	Refresh Program Overview
8	A Georgetown Education
10	Structure of the MPS Program
13	Elective Courses
16	The Admissions Process

World, One Connection.



on to Georgetown
Technology Management Class





Robert L. Manuel, PhD

Robert L. Manuel, PhD, is dean of Georgetown University's School of Continuing Studies. He has made a career of creating innovative educational experiences. In addition to his work at Georgetown, he served as chief information technology officer, assistant dean, and clinical associate professor at New York University, where he was responsible for several master's degree programs, online education, and industry partnerships. He has a PhD from New York University, an MS from Syracuse University, and a BS from Allegheny College.

Leadership roles within the information technology (IT) field are evolving nearly as rapidly as the innovations themselves. Today's most sought after IT managers and executives are taking on expanded roles that tie technology to organizational strategy, leadership, and bottom-line performance.

The field is no longer about protecting and keeping information—it's about leveraging the power of information to reach new and higher goals.

Georgetown's Master of Professional Studies (MPS) in Technology Management program links technology professionals like you to the advanced skill sets, theoretical knowledge, and practical experience you need to advance and excel in your career. As part of this dynamic program, you will learn from seasoned pioneers and thought leaders at the forefront of innovation and action in the field of IT management.

The program functions as a bridge between tradition and the future. Wholly representative of the Georgetown experience, the program applies more than two hundred years of academic excellence to meet the demands of the global economy. It prepares leaders to excel in markets where opportunities are and will be plentiful.

Of course, convenience is also a hallmark. Designed for working professionals, the MPS program is housed in a new state-of-the-art Communications and Technology Center on Georgetown University's Clarendon Campus in Arlington—located directly across the street from the Clarendon Metro station.

We invite you to join the Georgetown community—a robust network of professors, fellow students, industry professionals, and Georgetown alumni who work together to develop ideas that advance the greater society. I encourage you to learn more about the Master of Professional Studies in Technology Management program, get to know us, and take your place as a member of our family.

Sincerely,

A handwritten signature in cursive script that reads "Robert L. Manuel". The ink is dark and the signature is fluid and legible.

Beverly Magda, PhD



I have to confess—I was a computer science major who hated programming. I’ve always considered an IT career an opportunity to help people solve problems, overcome their fears, and embrace technology. That’s why I’m particularly excited about Georgetown’s Master of Professional Studies in Technology Management program.

The stereotypical computer professional no longer rules in today’s IT industry. A mastery of technical skills is still vital, but there must be a full complement of people and leadership skills. Research shows time and again that managing people during technological change is as important—if not more so—as managing the technology itself. This “softer side” of technology, including effective communication, has gained greater importance as IT has become more inseparable from organizational strategy and productivity.

The bottom line: IT professionals who can guide people and organizations through periods of technological growth will become a sought after commodity.

At Georgetown, we’ve designed our MPS in Technology Management program with these considerations at the forefront. It’s our mission to help you maximize your career opportunities in the present and future IT marketplace. We’ll introduce you to proven techniques to involve staff members in technological change from the start, to train employees to minimize productivity loss, and to boost the value of IT across the organization. Through our program, I’m confident that you will gain the breadth of skills needed to successfully spearhead major technology initiatives and overcome the day-to-day challenges.

I look forward to learning more about your career aspirations, talking to you about our graduate program in Technology Management, and welcoming you to the Georgetown family.

Until then,

A handwritten signature in dark ink that reads "Beverly Magda". The signature is written in a cursive, flowing style.

Beverly Magda, PhD, is associate dean of Master of Professional Studies in Technology Management at Georgetown University’s School of Continuing Studies. She brings nearly 20 years of experience in information technology, with more than half of the time in education and not-for-profit organizations. Previously, Beverly headed up the IT initiatives at the Humane Society of the United States and Johns Hopkins University. Her research on the effects of technological change on people has led to presentations across the country and consultations at organizations undergoing technological change. She holds a PhD in Engineering and Technology Management from The George Washington University and a master of science and bachelor of science degrees from the University of Maryland University College.



Refresh

Program Overview

Georgetown University's Master of Professional Studies in Technology Management graduate degree program gives you the advanced skills to accomplish your professional goals and propel your career forward. Every course offers a carefully balanced mix of theory and practical knowledge. The program heavily emphasizes the critical relationship between management functions and technological savvy.

You will have opportunities to develop mastery of project management skills essential to the most qualified IT leaders, such as assessing components of the triple constraint theory and managing virtual teams. You will advance your understanding of capital budgeting methodologies, concepts of risk and return, and human resources fundamentals that are critical to sound management.

On the technical side, you can explore the organizational impact of emerging IT trends, such as Web 2.0, service-oriented architecture, and on-demand computing. You can gain a deep understanding of how to analyze and design modern enterprise-wide systems, focused on object-oriented analysis and design concepts. You can also delve deeper into the essentials of network technology, including routing algorithms and policies, emerging innovations, and the economic characteristics of networks.

The Washington metropolitan area is home to more than 9,000 technology companies; leading aerospace, telecom, and biotech firms; several hundred internationally owned companies and international associations; the federal government; and premier defense contractors. What they all have in common are large networks, sophisticated databases, and an unprecedented need for managers to connect technology with business strategy.

“In developing this program, I incorporated topics essential to fulfilling the information technology and management needs within the profession. The emphasis on practical, day-to-day skills will allow graduates to be immediately effective within the IT workforce.”



~ M. BRIAN BLAKE, PHD, *Program Co-creator*





“It is important for next-generation technologists to weave business operations into the fabric of their IT practices and infrastructure. The goals of this program represent these best practices.”

~ SANDY CARTER, *Vice President, IBM*

The U.S. Bureau of Labor Statistics (BLS) predicts robust job growth for IT careers—more than double the average growth rate for all occupations between 2006–2016.¹

BLS also points out that IT professionals with strong management skills and a thorough understanding of business practices and principles will enjoy excellent opportunities as companies increasingly look to technology to drive revenue.

In fact, technology departments are steadily taking on far more strategic roles for their companies.² As simpler functions such as coding, testing, maintenance, and basic support are increasingly outsourced, today’s chief information officers (CIOs) more often deal with strategy and business integration functions. Successful managers must stay ahead of emerging technologies and the ways of deploying them to enhance business efficiency and help establish competitive advantages.

Choose Your Direction

At the end of the program, you’ll have unique perspectives on technology management and business operations, how the two interconnect, and how to integrate them to optimize operational performance. You will have insights into strategic decisions as they relate to technology core business planning, from budgeting for projects and programs to hiring specialists and establishing administrative procedures and policies.

Above all, you will have options for your future. Your well-rounded experience at Georgetown will prepare you for technology leadership positions within organizations of all types in all sectors. You will have the capacity to serve as an invaluable outside consultant on enterprise implementation and the management of information systems, an entrepreneur leveraging technological advances with

1 Source: *Occupational Outlook Handbook*, 2006 to 2016.

2 Donner, Francesca. What’s Next for IT? (2007, July 30). *Wall Street Journal*, p. R6.



What do you gain from Georgetown's MPS in Technology Management graduate degree program?

- › *The ability to manage diverse teams, assess network systems, harness new innovations, and determine the return on technology investments*
- › *The ability to link theory to practice and core technology management functions to overall organizational strategy*
- › *Valuable connections with senior-level professionals*

customer demand, or an executive maximizing the bottom-line impact of information utilization.

As the economy rebounds, more opportunities will emerge for talented professionals who possess the vision, passion, and skill to launch a new generation of solutions aimed at improving back-end efficiency, increasing productivity, and augmenting user experiences at every touch point.

Accomplished Faculty, Immersive Education

Instructors in Georgetown's MPS in Technology Management graduate degree program bring with them diverse accomplishments and relevant experience. They lead international private-sector corporations and consultancies. They represent nongovernmental organizations with vast reach and responsibility. They come from all sectors of government and the corporate world.

The program's instructor core is distinguished among Georgetown's thousand-plus faculty as an unprecedented collection of scholars, top-ranking executives, and industry leaders working together to deepen your comprehension and strengthen your professional achievement. These experts were carefully chosen as leaders at the cutting edge of their disciplines. They will help ensure that you have advanced knowledge of fundamental technology management issues, practices, and applications, then push you to explore the challenges of linking technology with business objectives.

Your instructors will guide you through a demanding learning experience built on consistent engagement with the most accomplished leaders in the field—including powerful mentors, speakers, advisors, and authors representing all facets of information technology.



A Georgetown Education: Relevancy Rooted in Tradition

Georgetown University has been preparing students to create and lead change for the benefit of society since 1789. Yet the university has never been more relevant. It is a nexus for leadership, where U.S. presidents and first ladies, cabinet secretaries, heads of intelligence agencies, foreign heads of state, Supreme Court justices, activists, corporate titans, award-winning artists, and other leaders have studied, taught, and conversed in an environment where sharing ideas is priority number one.

The tradition of the Georgetown community is one of active learning. The university remains passionately committed to the principles on which it was founded: that knowledge is not pursued for its own sake, but instead to effect change in the world; that education should address the whole person, emotionally, spiritually, and intellectually; and that the essence of learning is to join a dialogue of depth and dimension that continues throughout life.

As a student in the Master of Professional Studies program, joining more than 7,000 other graduate students at Georgetown, you will be encouraged to become part of a grand tradition by becoming extraordinarily proficient in a career field that adds meaning and purpose to your life and is of consequence to the greater society.

“The MPS in Technology Management program will help create professionals with a unique blend of technical know-how and organizational acumen—qualities that are important to our colleagues and clients in the national security domain. The stature of Georgetown University is a plus.”



~ ALON JAFFE, *Executive Vice President, Cleared Solutions Inc.*



Meeting Market Demands

A recent Gartner survey of 1,400 CIOs illustrated the need for growth and change in the IT field. “The survey results make it clear that business expectations of IT have changed dramatically and executives are expecting their CIOs to move beyond concerns about cost, security, and quality to activities that help grow the business,” said Marcus Blosch, vice president and research director at Gartner Executive Programs, a membership-based organization of 3,000 CIOs worldwide.

As technologies continue to commoditize, 70 percent of respondents recognize the need to build new business skills.

Georgetown’s MPS in Technology Management program helps professionals strengthen the skills in business and management disciplines that increase their value within and beyond their organizations.



Structure of the MPS Program

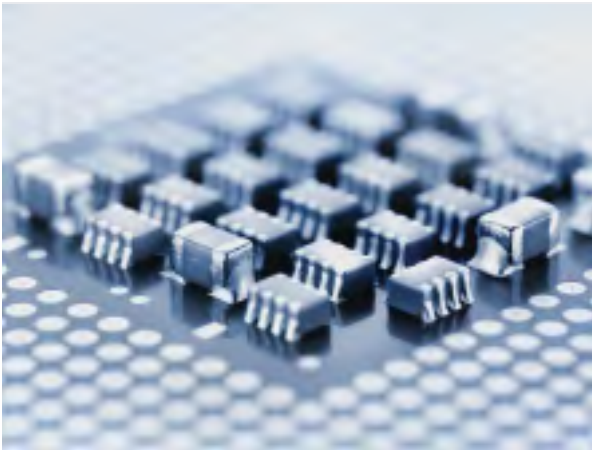
Work-Life-Study Balance

Life is a juggling act even before you add a rigorous degree program to the mix. For many of our students, the MPS in Technology Management program is part of the natural flow of their days and weeks. The program is consciously designed to help you balance your academic, professional, and personal lives. A choice of full-time or part-time schedule, supportive academic services, and an involved community help you to immerse yourself in the program and still take care of your other responsibilities.

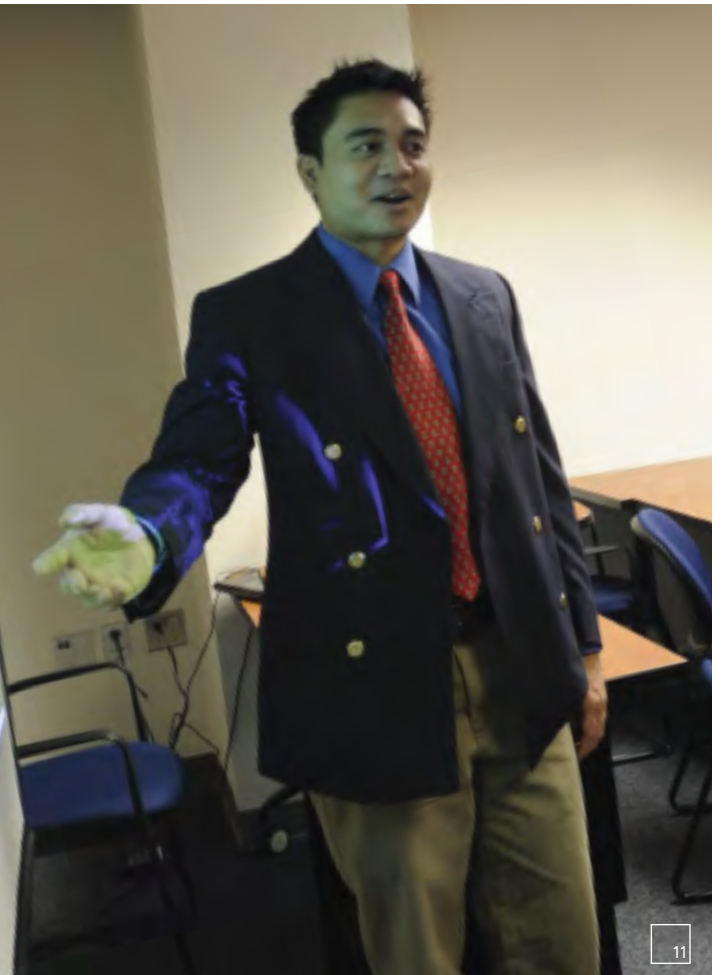
To obtain a Master of Professional Studies degree, students must earn 30 credits. All students take a core course in applied ethics, a capstone course, and three foundation courses relevant to success in the field. Upon completion of your required courses, you will be able to choose from a series of elective courses.

The **Core Course in Applied Ethics** provides a firm foundation of essential concepts, skills, and strategies to allow for informed decision making and effective leadership. The course emphasizes ethical responsibilities and core values endemic to the professional world, cutting across several disciplines but focusing particularly on the connections between applied ethics and areas such as technology, business management, and law. You will explore real-world dilemmas and the framework for reaching ethical decisions as a leader. Topics may include intellectual property rights, government regulations, and privacy, among others. Professional guests from various fields—such as business, law, and government—will present case studies representative of their experiences.

The **Capstone Course** is the culmination of your academic and professional experience in the MPS program. Over the course of the semester, you will be asked to apply the knowledge gained during the program to your own work environment. You will incorporate the skills necessary for analyzing key issues, thinking creatively, and making sound decisions in order to develop and execute plans. Your project will most likely address the challenges you face in your current work and should be of interest to you, as well as result in professional growth and provide benefits to your organization.



Georgetown's MPS in Technology Management program enables managers and executives to earn a professionally-oriented graduate degree within two years while working full time. Most courses are offered during evenings and weekends at Georgetown's Clarendon, Virginia, campus—easily accessible via Metro.





The Advanced Professional Certificate

Well-established professionals who wish to develop greater expertise in a specific area and take advantage of Georgetown's outstanding course offerings may elect to pursue the Advanced Professional Certificate (APC) instead of the full master's degree. This five-course, 15-credit option is available with the approval of the associate dean for technology management. The same acceptance standards apply as for the full master's program. Students may choose to complete an additional 15 credits once the APC is complete to obtain a full master's degree.

The **Management of Technology** course provides theoretical and practical experience in using information technology to support organizational decision making processes. You will examine the requirements of an organization to optimize its competitive strategy and core competencies. You will learn different tactical, strategic, and organizational factors relative to various information systems, as well as how to gauge the effectiveness of an organization's information system. You will explore tools and techniques related to hiring, developing, assessing, and retaining staff—as well as theories and methods of managing remote workers and virtual teams.

The **System Requirement and Analysis** course gives you a strong understanding of the system development life cycle (SDLC). You will learn methods of gathering, analyzing, and prioritizing business requirements, with a focus on ease of use for IT staff and end users alike. The course covers many of the specifics of gap analysis through correctness and completeness methods, the use of case models, process and data modeling, database design principles, and more. In addition, the course covers SDLC models, Unified Process and CASE tools, Rapid Application Development methodologies, Package Evaluation and Selection, and more. Finally, the course will be well-grounded in practice through the coverage of relevant requirements standards (IEEE Standard 830) and current government practices for requirements management (System Requirements Specifications).

The **Financial Analysis for Managers** course provides theories and practical techniques related to acquiring, accounting for, and allocating an organization's financial assets. It analyzes basic business problems that managers face as they make technology decisions for their organizations. Topics include return on investment, theories of portfolio management, financial statement and discounted cash flow analysis, interest rate determination, capital budgeting methodologies, concepts of risk and return, asset pricing, and valuation models. You will apply the knowledge you gain to issues you face within your work environment and to real-world examples through business cases and case studies.

Elective Courses

(Five Required)



Project Management and Leadership for Technology

Project Management for IT Professionals

Master both the practical and theoretical sides of project management for IT professionals. In keeping with the ANSI standard for project management, this comprehensive course covers such core concepts as triple constraint theory, critical path method, and tracking earned value. You'll follow the project life cycle from planning to monitoring to control and learn how to meet the most common challenges to successful project management.

Project Risk/Change Management

Are you prepared to face the common risks of project and change management? In this course, you'll learn to apply the appropriate change management processes to any situation. Course content covers how to plan, identify, assess, monitor, and respond to risk using tools such as ranking methodologies, decision trees, influence diagrams, and risk simulation. Gain in-depth knowledge of specific approaches and models as well as the overarching theories involved with with change management at an organizational level.

Managing Diverse Organizations in a Flat World

This timely course focuses on defining project structure and reporting relationships; assigning project roles and responsibilities; and staffing, motivating, and leading an organization that can compete effectively worldwide. Specific topics include conflict resolution, process control and automation, outsourcing, offshoring, real-time access to information, and other practices required for effective management in the changing demands of the flat world.

Technology Entrepreneurship

How do you transform a technology driven idea into a customer driven product that lays the foundation for a successful entrepreneurial venture? This course examines the start-up process from both sides—exploring the perspective of the entrepreneur as well as the corporation pursuing a model of open innovation. Based largely on case study discussions, the course focuses on intellectual property, high-tech product development, venture finance, high-tech market strategy, strategic alliances, and entrepreneurial leadership skills.

Marketing and Exploitation of Technology Trends

Marketing Technology Products and Services

Discover how to leverage the Internet and identify new marketing opportunities for technology-based products and services. In this up-to-the-minute course, you'll learn to develop and execute marketing plans that integrate social networking tools and other emerging media options. Content also covers market research, strategy development, customer segmentation, and competitor analysis—with a special focus on business intelligence and related technological methods of effective information and resource management.

e-Business Technology Trends

Effective corporate e-business strategies demand an in-depth understanding of the various technologies that enable electronic business. In this course, you'll examine how emerging trends—in telecommunications, search engines, security, portals, Web site and user interface design, electronic payment systems, e-publishing and digital download features, mobile commerce, and pervasive computing—impact industry, corporate strategy, and competitive dynamics. Specific topics covered include Web 2.0, service-oriented architecture, on-demand computing, and open source software.

Enterprise Modernization and Technology Assertion

Enterprise modernization changes every dimension of an organization—how it views itself, responds to its needs, and conducts its business. In this course, you'll focus on the management challenges posed by emerging technologies and learn how to overcome these obstacles. You'll explore how these technologies affect (and are affected by) political, social, economic, and cultural factors. Specific topics include emerging standards, nanotechnologies, artificial intelligence, artificial life, and expansion of the digital world.

R&D Management

What challenges do managers face as they seek to make research and development (R&D) serve the needs of the corporation in an increasingly competitive global marketplace? This course explores managing R&D in a corporate environment from both strategic and tactical perspectives—providing a deep understanding of technology as a powerful tool for competitive advantage and growth. Topics include key R&D business processes, issues in global R&D management, and methods of measuring and optimizing the return on R&D.

System Design, Development, and Management

Software Life Cycle Management

Gain a deeper understanding of the process of analyzing and designing enterprise-wide systems. This course focuses on the software engineering principles that can be leveraged for software application development. You'll focus on object-oriented analysis and design concepts using Unified Modeling Language methodology use cases, classes and object diagrams, inheritance, behavioral modeling, data abstraction, and information hiding. Additional topics include overloading, polymorphism, and programming languages such as .NET and Java.

Software Testing Techniques

Learn how to design and implement practical steps for structured software testing. This course will introduce you to different methods for testing software and provide a step-by-step methodology for testing applications. Specific topics include test cycles and objectives, common software errors, effective test case design, testing tools review, test group management, problem tracking systems, and effective test result documentation. You'll also explore how testing can impact project schedules and budgets.

Human-Computer Interaction

This course introduces you to the complete life cycle of interface development—from the user’s point of view. In exploring the field of human-computer interaction, you’ll discover basic human factor approaches and develop technology to build interfaces. In keeping with the standard pattern of product development, you will explore key aspects of the design process, including the analysis of users’ needs, the formalization of these needs, the exploration of possible solutions to address these needs, the evaluation of the potential of these solutions, and the implementation of prototypes and their evaluation.

Database Analysis, Design, and Management

Master the fundamentals of databases—from structure to security—in this comprehensive course. You’ll begin with the core principles of database design, analysis, deployment, and use: data models, entity-relationship diagrams, data normalization, data dictionaries, database security and access rules, and common database applications. Move on to advanced topics, including connectivity technologies, scripting languages, API interface designs, warehousing, and data mining methods. You’ll also explore how to implement a relational database management system.

Information Technology

Data Warehousing and Business Intelligence

Explore the role of a data warehouse in business intelligence applications. This course provides a complete introduction to data marts, data warehouses, and data mining. Learn the finer points of data warehouse planning, design, implementation, and administration—and the basics of the ETL (extract, transform, and load) methodology and related theories. You will also review and compare various business intelligence applications, methodologies, analytical techniques, tools, and models.

Essentials of Network Technology

Designed for professionals responsible for designing and managing organizational networks, this course covers the technical foundations of computer networks, including Internet architecture, network technologies and protocols, routing algorithms and policies, network applications, emerging network technologies, and network security. You will also explore the business, economics, and policy of networking.

Managing Information Security

Designed for managers charged with protecting IT systems, this course prepares you to anticipate the threat of Internet attacks—and develop effective strategies to defend against them. Learn the core concepts of data security, signature algorithms, key distribution, hash functions, and identification schemes. You’ll even explore public/private key cryptography, secret key schemes (DES and IDEA), public key schemes (RSA and ElGamal), and systems based on elliptic curves. The pertinent implementation aspects and current security estimations will be covered for all schemes.

e-Business Architecture

Web portals, m-commerce, Web site design, security, e-marketing, B2B, e-payments—learn which e-business applications to choose and how to use them. Using best practices, this course introduces you to the various technologies used in e-business and their strategic implications. You’ll explore not only the technical infrastructure but also the business impact surrounding the analysis and implementation of an e-business.

Service-Oriented Architecture

Learn the standards of service-oriented architecture (SOA) implementation and gain a thorough understanding of the value, benefit, costs, effectiveness, and challenges of moving to an SOA. In this course, you’ll master the basics of modeling, designing, and implementing an SOA—and discover the theories and best practices behind interoperability.



The Admissions Process

Deadlines

Both the MPS and APC programs operate on a three-term academic schedule: fall, spring, and summer. Students may start their chosen program at the beginning of any of these three terms. Qualified applicants are accepted throughout the year on a first-come, first-served basis until all available openings for the upcoming term are filled. There are no set deadlines, but prospective students are encouraged to submit their applications as early as possible to ensure consideration for an available placement.

Admission application priority deadlines are August 1 for the fall semester, December 1 for the spring semester, and May 1 for the summer semester.

International applicants must have their transcripts evaluated by the World Education Services (WES), and all non-native English speakers must take the TOEFL.

Prerequisites

Candidates for either the MPS or APC program must have completed a bachelor's degree from an accredited four-year college. Additionally, candidates for the Advanced Professional Certificate must demonstrate a high level of proficiency in their chosen concentration.

Application Requirements

All applicants for either the MPS or APC program must submit the following to be considered for admission.

1. A completed application form. Candidates may apply online at <http://scs.georgetown.edu/mps>.
2. Original official transcripts from each postsecondary institution attended, including all graduate work if applicable.
3. A personal statement (guidelines for this statement are included with the application).
4. Two letters of recommendation from college faculty or employers.
5. A current resume.
6. A nonrefundable check for the application fee.

Note: A professional portfolio of relevant work may also be submitted at the applicant's discretion.

Financial Aid

Master of Professional Studies and Advanced Professional Certificate programs are registered with Georgetown University. Students may be eligible for federal tuition assistance if they qualify.

To determine eligibility for financial aid, students must complete the Free Application for Federal Student Aid (FAFSA). This form is available online at www.fafsa.ed.gov.

To be eligible, students must be enrolled at least half time.





3307 M Street NW
Suite 202, 2nd Floor
Washington, DC 20057
<http://scs.georgetown.edu/mps>

