The Professional Science Master's degree (PSM) programs at the University of the District of Columbia are designed for graduate students and working professionals to prepare them to address the complex issues facing urban communities around the world. Students may earn a certificate in one of three areas of specialization: Water Resources Management, Urban Sustainability, or Urban Agriculture. By combining the certificates with the core and professional courses, you can earn a PSM degree. Each certificate consists of 15-16 credit hours. The core and professional courses consist of 13 credit hours, and students are encouraged to take an elective from any of the PSM programs. A minimum of 35 credit hours is required for the PSM degree, which can be completed in less than two years of full-time study.

**Program Overview**

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**Graduates Will:**

- Demonstrate effective critical and problem solving skills by applying both qualitative and quantitative approaches.
- Apply advanced statistical and geospatial analytical tools to support informed decision making.
- Demonstrate professionalism with good oral and written communication skills.
- Apply both basic and state-of-the art analytical technologies in determining the quality and sustainability of natural or built environments.
- Apply project management and sustainability concepts to plan, execute, monitor and control a project.
- Monitor and assess the impact of urban development on ecosystem health and services.

**Contact**

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Program Director
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PROFESSIONAL SCIENCE MASTER'S DEGREES

PROGRAM CURRICULA

Water Resources Management Program (15 credit hours, lecture and lab):
Water Quality Assessment, Monitoring & Treatment
Surface & Groundwater Hydrology
Water Quality Modeling
GIS for Water Resource Management
Stream Restoration
(Electives: A minimum of 3 credit hours is required)

Urban Agriculture Program (15 credit hours, lecture and lab):
Water Quality Assessment, Monitoring & Treatment
Food Production and Agro-ecology
Advanced Climate Science
Advanced Sustainable Urban Agriculture
Urban Land Use Planning
(Electives: A minimum of 5 credit hours is required)

Urban Sustainability Program (15 credit hours, lecture and lab):
Food Hubs in Urban Sustainability
Ecological Economics
Urban Land Use Planning
Advanced Climate Science
Sustainable Design I
(Electives: A minimum of 5 credit hours is required)

Required Experiential Learning (4 credit hours of work & professional training)
Real World Experience through Employer Site Internship
Capstone project, including grant writing

Core and Professional Courses:
Sustainable Entrepreneurship and Business Incubator
The Systems Approach and Project Management
Public Communication for STEM Professionals
Ethics, Responsible Conduct of Research & Professional Responsibility
Quantitative and Qualitative Research Methods

All three programs require the same core and professional courses

*Note Each PSM program may be completed as a certificate. When combined with the required core and professional courses, students receive a PSM degree.