NYC’S LEADING GRADUATE PROGRAM IN
URBAN INFORMATICS
FULL-TIME MS • PART-TIME MS
ADVANCED CERTIFICATE
YOUR CITY. YOUR LAB.
YOUR DATA REVOLUTION.
The Center for Urban Science and Progress (CUSP) was created as a historic partnership with NYU, the City of New York, and other academic and industrial partners to make cities around the world more efficient, livable, equitable, and resilient. By 2050, 66 percent of the world’s population is projected to live in urban areas. How can rapidly growing cities provide a high quality of life to citizens of every socioeconomic status? How will they effectively and efficiently deliver services, address resource allocation, and increase citizens’ access to green space?

With NYC as its laboratory and classroom, New York University’s CUSP uses advances in data creation, storage, and analytics to investigate and answer such questions. These activities are making NYU CUSP the world’s leading authority in the emerging field of urban informatics. CUSP’s impact-driven research and educational programs examine complex urban issues and contribute practical solutions for challenges facing New York City and growing cities worldwide.
Graduate programs at NYU CUSP offer a unique, interdisciplinary, and cutting-edge approach that links data science, statistics and analytics, and mathematics with complex urban systems, urban management, and policy. Our programs expose students to the inner workings of city agencies and create opportunities to challenge themselves through immersive, hands-on data projects. The curriculum emphasizes developing necessary technical skills and critical problem-solving frameworks. We also provide research opportunities and real-world experiences through internships and practicums that enable students to be successful in a wide range of career trajectories.

Our rigorous programs are designed to prepare you for a rewarding and fulfilling career in urban informatics, developing the technical and problem-solving skills to effectively use data for social good. Students are immersed in every aspect of this exciting, multidisciplinary field, both in the classroom and through hands-on learning opportunities in research, internships, and interactions with faculty and NYU CUSP industry partners.

### APPLIED URBAN SCIENCE AND INFORMATICS

**MASTER OF SCIENCE**

- 30 Credits • 1 Year Full Time • 2 Years Part Time

The MS in Applied Urban Science and Informatics program will provide you with the ability to use large-scale data from a variety of sources to understand and address real-world challenges in the urban context. The program provides core courses in urban science, urban informatics, and information and communication technology in cities. You will have the opportunity to select from multiple urban domains and informatics disciplines to gain breadth and depth in the application of big data analytics to urban problems.

**ADVANCED CERTIFICATE**

- 12 Credits • 1 Year Part Time

The Advanced Certificate program is designed for students who wish to complement previous graduate studies with applied work in urban informatics, or those with a bachelor’s degree and work experience who want to enhance their capabilities in urban informatics. The 12-credit program, completed over three semesters, enables students interested in focusing on the structure and development of large-scale quantitative data from diverse sources to understand urban problems and their solutions, particularly in operational contexts.
MASTER OF SCIENCE
IN APPLIED URBAN SCIENCE
AND INFORMATICS

FLEXIBLE PROGRAMS OF STUDY
NYU CUSP offers the option to complete the 30-credit MS on a full-time or part-time schedule:

One Year Full Time
Ideal for students seeking immersion in a research- and project-intensive environment, in order to complete their MS degree in an accelerated time frame. From August to July, students learn from world-class faculty and researchers, and build a supportive network.

Two Years Part Time
Allows working professionals to maintain their employment while attending the graduate program on a part-time basis. The curriculum and elective offerings are the same as the full-time program and are offered in the evening.

THE CORE CURRICULUM
Students develop their curriculum by building upon core courses with electives, applied project intensives, and global immersion offerings. All students complete the following core requirements:

Urban Science Core
The Urban Science Core provides students with a foundational understanding of the theories of urban form and function, and the application of data-driven approaches to urban challenges. The Urban Science Core gives students a foundation in the extensive social science literature and research on the study of cities.

Informatics Core
The Informatics Core prepares students with computational skills to work with large-scale data from a variety of sources, to understand and address real-world challenges in the urban context. Students learn the fundamentals of data science and computer science applications such as databases and data management, data mining, visualization, programming, clustering algorithms, naïve Bayes, and regression models.

Civic Analytics and Urban Intelligence fulfills this requirement.

Courses include Applied Data Science and Principles of Urban Informatics.

ELECTIVE OPTIONS
CUSP offers you the opportunity to customize your MS program around the skills you want to develop and your professional interests and strengths:

Civic Analytics
Students who have an interest in civic analytics to inform urban operations and policy decisions can develop skills needed for data-driven decision-making in order to develop and implement analytics projects in city agencies or other organizations.

Electives include Urban Decision Models.

Urban Informatics
Students who have an interest in urban informatics and want intensive training in data science as applied to cities can develop technical capabilities required for big data informatics.

Electives include Machine Learning for Cities and Urban Big Data & Management.

Please note this program is also offered as a 12-credit Advanced Certificate.
## SAMPLE CURRICULUM

### One Year Full Time

<table>
<thead>
<tr>
<th>PRE-FALL 0 CREDITS</th>
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<th>SPRING 12 CREDITS</th>
<th>SUMMER 6 CREDITS</th>
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<tr>
<td>Orientation Week</td>
<td>Principles of Urban Informatics</td>
<td>Capstone I</td>
<td>Capstone II</td>
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<tr>
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<td>Civic Analytics and Urban Intelligence</td>
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<tr>
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<td>Applied Data Science</td>
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<td>Urban Spatial Analytics Urban Decision Models</td>
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### Two Years Part Time

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<th>SPRING 6 CREDITS</th>
<th>SUMMER 3 CREDITS</th>
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<td>Principles of Urban Informatics</td>
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<td>YEAR 1</td>
<td>Applied Data Science</td>
<td>Capstone I</td>
<td>Capstone II</td>
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<td>Urban Spatial Analytics Urban Decision Models</td>
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<tr>
<td>YEAR 2</td>
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### Color Codes
- **ORIENTATION**
- **CORE REQUIREMENTS**
- **LAB**
- **ELECTIVE**
ORIENTATION WEEK

Orientation Week is the start of the MS in Applied Urban Science and Informatics program. The intensive, week-long program includes a number of speakers, workshops, academic boot camps, and events that introduce students to CUSP, the field of urban informatics, and NYU resources.

Working in teams, students are also challenged to address a significant, persistent urban problem by developing an analytical framework to model and understand the problem, identifying data sources and needs, and presenting a potential analytic solution and implementation strategy. NYU CUSP students share their findings and solutions to the entire cohort at the end of the week.

GLOBAL DATA DIVES

As part of the co-curricular education at NYU CUSP, students have the opportunity to participate in the Spring Break Data Dive, in which students travel to London to work on actual urban challenges using the analytics skills developed in the program. The host city provides their data sets and a specific urban problem; students bring their expertise to offer proposals using informatics techniques.

The Data Dive targets the global perspective on urban skills needed to link data science with the public good in a range of political, social, and economic contexts.
CAPSTONE PROJECTS

The Capstone Program is a six-month applied urban analytics project that partners CUSP graduate student teams lead by a faculty advisor with a public sector, private sector, or academic organization that is looking to address a critical urban issue or problem.

Capstone projects approach real-world challenges through problem identification and scoping, data collection, and applying data analytics and visualization techniques. Student teams use a combination of technical data analytics, visualization, and machine learning skills to utilize urban data science techniques within the constraints of political, social, and financial considerations, as well as address issues of data privacy, validity, and transparency.

APPLIED URBAN SCIENCE GROUP

The Applied Urban Science Group (AUSG) is an association of NYU CUSP graduate students and alumni who are committed to advancing the fields of urban science, data-driven city management, and urban analytics. The AUSG regularly hosts cutting-edge debates on urban science and analytics—featuring leading speakers from tech firms, chief data officers, and city leaders—for a dialogue on high-impact ways to improve cities through data.
INFORMATICS TO IMPACT
GRADUATE STUDENT SUCCESS

CAREER PATHS
Firms are increasingly looking for data scientists and analytics experts to unlock the potential of their data. CUSP prepares students for careers helping these organizations make more informed business decisions using data. While our research and academic focus is on using data to improve urban systems, CUSP students utilize the skills they learn in this program in both the public and private sectors. Our alumni can be found at leading firms in professional services, financial services, technology, and a whole host of other professional companies, in positions ranging from data scientist to management and leadership roles.

Numerous resources at NYU, NYU Tandon School of Engineering, and the CUSP network pave the way for many career opportunities after graduation. NYU Tandon and CUSP offer technical and social workshops, networking and mentoring activities, research seminars, and workplace events to help students discover and customize a career path in the evolving industry of urban informatics. Students are able to seek individual assistance in exploring internship and employment opportunities and guidance for their individual job search efforts through both Tandon Career Services and NYU Wasserman Center for Career Development.

If your interests are in entrepreneurship, you will have opportunities to develop the skills to manage and create new ventures and to foster innovation in the urban information and technology sectors. The program’s emphasis is on bridging theory and practice to learn how to transform ideas into new market opportunities and start-up ventures.

GRADUATE RESEARCH
Students have the opportunity to apply for a graduate research assistantship to help further professional development by working with a faculty mentor and becoming immersed in research activities. Graduate research assistants are chosen at the beginning of each semester through a competitive selection process based on the needs of the CUSP research faculty and the required skill set for each research project.

INTERNSHIPS
Internships with NYU CUSP’s agency and industry partners offer an opportunity to gain relevant experience in urban informatics and a realistic perspective on how data can be leveraged to improve cities. Internships provide rich learning experiences that complement classroom and project-based coursework. They also develop our students’ practical skills, hone interests, and create diverse opportunities for career advancement.
# LIFE AFTER CUSP

## CAREER OUTCOMES

### JOB PLACEMENT RATE

<table>
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<th>Rate</th>
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<tr>
<td>Class of 2017</td>
<td>85%</td>
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<tr>
<td>Class of 2018</td>
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*In the first six months following graduation*

### AVERAGE STARTING SALARY

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<tr>
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<tbody>
<tr>
<td>Class of 2016</td>
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<td>Class of 2017</td>
<td>$93,000</td>
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<tr>
<td>Class of 2018</td>
<td>$95,000</td>
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</tbody>
</table>

A sampling of companies, agencies, and organizations hiring our graduates:

- DataKind
- Amazon
- Apple
- Citibank
- CART
- Goldman Sachs
- NBCUniversal
- GE
- Ontodia
- Accenture
- Bloomberg Television
- Deloitte
- WeWork
- Booz | Allen | Hamilton
- IBM
- McKinsey & Company
- Two Sigma
- Alorica
- New York City Transit
- American Express
JOIN THE CUSP COMMUNITY

ADMISSION REQUIREMENTS

If you have an undergraduate or master’s degree in science, mathematics, engineering, or urban design/policy, along with the aptitude and inspiration to apply your quantitative skills to the betterment of urban life, you should consider CUSP’s Master of Science or Advanced Certificate in Applied Urban Science and Informatics.

Your academic and professional experience need not be in a field directly linked to cities and urban issues. It is more important that you can demonstrate rigorous prior academic training and a passion for applying analytical skills to problem-solving in an urban context. We seek talented students who are looking for a new challenge. We intend to bring together students with diverse technical skills who want to make a difference in how people live and improve quality of life in cities.
DEADLINES & FEES
Admissions decisions are typically released within four weeks of each application deadline.

EARLY ADMISSION  REGULAR ADMISSION  FINAL DEADLINE
December 15    February 15    April 15

APPLICATION COMPONENTS
• A U.S. bachelor’s degree or equivalent (as verified by WES or ECE) from an accredited university
• Official transcripts from all colleges or universities attended
• GRE or GMAT score
• TOEFL or IELTS score (international students only)
• Resume or CV
• Two letters of recommendation
• Essay questions
Please see NYU CUSP’s website for the full application requirements.

TUITION & FINANCIAL AID
Total Tuition and Fees: $59,604*
Scholarships range from $10,000 to full tuition
In addition to the financial aid opportunities available to all NYU graduate students, all applicants (including international students) are automatically considered for merit-based scholarships during the evaluation process.

*Tuition for 2019–2020 academic year.

APPLY
Online application: apply.cusp.nyu.edu/apply
Application guide: cusp.nyu.edu/guide
Admissions FAQ: cusp.nyu.edu/admissions-faq