

# QUANTITATIVE METHODS FOR POLICY ANALYSIS (ADVANCED CERTIFICATE)

NYSED: 40141 HEGIS: 2102.00 CIP: 44.0401

## Program Description

Leveraging NYU Wagner's curriculum in quantitative analysis, this Advanced Certificate provides policy analysts and practitioners with expanded data and analytics expertise. You'll learn the advanced tools you need to extend your skillset in quantitative analysis of policy, including data science, survey research, and social research.

## Admissions

Admission to the Advanced Certificate program requires the following:

- Online Application
- Essay
- Resume
- Transcripts
- Application Fee

Admission is selective and based on the applicant's prior academic record and professional achievements. Advanced Certificate candidates are not eligible for scholarship. For more information, please contact [wagner.admissions@nyu.edu](mailto:wagner.admissions@nyu.edu).

Due to constraints relevant to US immigration regulations, applicants who will need an F-1 or J-1 student visa are not eligible to apply to certificate programs.

Students currently enrolled in a Wagner degree program cannot be admitted to nor simultaneously enrolled in a Wagner Advanced Certificate program.

See Advanced Certificate and Non-Degree Application Checklist (<https://wagner.nyu.edu/admissions/degree-checklist/apc-nd/>) for additional admission requirements and instructions specific to this program.

## Program Requirements

Students must successfully complete 15 credits to earn this Advanced Certificate. The curriculum is designed to be completed in three semesters, however students may take up to three years. The required CORE-GP 1011 must be taken in the first semester and it is a prerequisite to most other courses in the certificate. Students who are able to waive CORE-GP 1011 must complete an advanced elective in its place.

Course	Title	Credits
<b>Required Courses</b>		
CORE-GP 1011	Statistical Methods	3
PADM-GP 2902	Multiple Regression and Introduction to Econometrics	3
<b>Electives</b>		
Select 9 credits from the following:		9
PADM-GP 2172	Advanced Empirical Methods	
URPL-GP 2618	Geographic Information Systems and Analysis	

PADM-GP 4147	Large Scale Data Analysis with Machine Learning I	
PADM-GP 4148	Large Scale Data Analysis with Machine Learning II	
PADM-GP 4501	Designing Data Collection for Program Evaluation, Policy, & Management	
PADM-GP 4502	Using Large Data Sets in Policy Research	
PADM-GP 4505	R Coding for Public Policy	
PADM-GP 4506	Python Coding for Public Policy	
<b>Total Credits</b>		<b>15</b>

## Sample Plan of Study

Course	Title	Credits
<b>1st Semester/Term</b>		
CORE-GP 1011	Statistical Methods	3
	<b>Credits</b>	<b>3</b>
<b>2nd Semester/Term</b>		
PADM-GP 2902	Multiple Regression and Introduction to Econometrics	3
PADM-GP 4147 or PADM-GP 4505	Large Scale Data Analysis with Machine Learning I or R Coding for Public Policy	1.5
PADM-GP 4148 or PADM-GP 4506	Large Scale Data Analysis with Machine Learning II or Python Coding for Public Policy	1.5
	<b>Credits</b>	<b>6</b>
<b>3rd Semester/Term</b>		
PADM-GP 2172 or URPL-GP 2618	Advanced Empirical Methods or Geographic Information Systems and Analysis	3
PADM-GP 4501	Designing Data Collection for Program Evaluation, Policy, & Management	1.5
PADM-GP 4502	Using Large Data Sets in Policy Research	1.5
	<b>Credits</b>	<b>6</b>
<b>Total Credits</b>		<b>15</b>

## Learning Outcomes

Upon successful completion of the program, graduates will:

1. Align organizational and institutional policies and practices with mission, strategy, culture, and broader policy objectives.
2. Secure and manage financial resources in a way that aligns with mission and strategy.
3. Demonstrate understanding of the policy lifecycle and the impact of social, economic, demographic, political, environmental, and regulatory factors.
4. Evaluate policies using appropriate, evidence-based methods and tools, including measuring differential impact on sub-populations.
5. Deploy conceptual frameworks to break down problems into constituent elements and to develop solutions.
6. Critically assess and synthesize existing research to identify its contributions and limitations, as well as possible research alternatives.
7. Demonstrate understanding of causality, including distinguishing between correlation and causation, the challenges to estimating causal relationships, and the importance of causality for determining impact.
8. Prepare succinct, well-argued, and well-organized written materials and verbal presentations with appropriately incorporated tables, graphs, and other visuals.

9. Translate awareness of the impact of individual and group demographics and identities into appropriate organizational, institutional, and societal policies and practices.
10. Lead projects, programs, and people, and manage resources in ways that adapt to changing social, economic, demographic, technological, and political conditions.

## **Policies**

### **NYU Policies**

University-wide policies can be found on the New York University Policy pages (<https://bulletins.nyu.edu/nyu/policies/>).

### **Wagner Policies**

Additional academic policies can be found on the Wagner academic policy page (<https://bulletins.nyu.edu/graduate/public-service/academic-policies/>).