

# MS in Civic Analytics

## Admission Requirements

Applicants are considered on an individual basis. In addition to the Graduate College minimum requirements, applicants must meet the following program requirements:

- **Baccalaureate Field:** Baccalaureate degree holders in any field may be admitted to the program. Students will be advised that prior coursework in statistics, geographic information systems, mathematics, or information technology disciplines is desirable.
- **Grade Point Average:** Minimum 2.75/4.00 for the final 60 semester (90 quarter) hours of undergraduate study.
- **Evidence of Quantitative and Analytical Skills:** Due to the quantitative nature of the Master of Science in Civic Analytics (MSCA) degree, applicants are asked to have or prove evidence of one or more of the following:
  - Bachelor or higher degree with coursework in data analysis or visualization
  - Transcripts that include a grade of B or higher in a course in statistics or calculus
  - Completion of a data science boot camp, training in coding and data, or relevant professional certifications
  - Professional or volunteer experience, internship placement, or works products related to quantitative analysis
  - GRE or GMAT scores
  - Other supporting evidence that the applicant deems appropriate

Students who are unable to provide any of the items listed above are still encouraged to apply. The department offers supplemental instruction for students needing additional preparation.

- **Minimum English Competency Test Score:**
  - **TOEFL iBT** 90, with subscores of Reading 21, Listening 21, Speaking 25, and Writing 23, **OR**,
  - **IELTS Academic** 6.5, with 6.0 in each of the four subscores, **OR**,
  - **PTE-Academic** 61, with subscores of Reading 51, Listening 47, Speaking 53, and Writing 56.
- **Personal Statement** Required. The brief personal statement shall address how the MSCA degree will further the student's educational and career objectives. The student will also provide an expanded narrative that discusses their familiarity with information technology and applied statistics.
- **Additional Materials**
  - *Required:* Applicants must submit a resume.
  - *Prerequisites:* The applicant must provide documentation that they have completed an undergraduate or graduate-level data analysis or statistics course in the last three years with a grade of B or higher. This course will be more than a research design course and cover descriptive and inferential statistics. If the student does not have such a course but meets the other requirements for admission, they will be required to enroll in PA 402 or equivalent course. This requirement would be waived for those coming to the program with a statistics degree.
  - *Optional:* Applicants may submit a 5–10 page writing sample and up to three letters of recommendation. These letters should be from instructors familiar with the applicant's academic

training or supervisors familiar with the applicant's professional experiences.

- **Nondegree Applicants** Nondegree Applicants must submit an official transcript from their baccalaureate institution, resume, and a letter stating which courses they would like to take and why they feel nondegree admission would be beneficial.

## Degree Requirements

In addition to the Graduate College minimum requirements, students must meet the following program requirements:

- **Minimum Semester Hours Required** 53.

Code	Title	Hours
<b>Required Courses</b>		
<b>Public Service Foundations (10 hours)</b>		
PA 401	Foundations of Public Service	
PA 506	Public Policy Development and Process	
PA 520	Data Ethics and Information Security	
<b>Analytics and Data Applications (24 hours)</b>		
PA 431	Civic Technology	
PA 433	Data Management	
PA 434	Intermediate Data Management and Analysis	
PA 435	Geographic Information Systems (GIS) for Public Managers	
PA 446	Coding for Civic Data Applications	
PA 470	AI & Machine Learning	
<b>Research Methods (8 hours)</b>		
PA 528	Public Program Evaluation	
PA 541	Advanced Data Analysis I	
<b>Electives (8 hours)</b>		
Select 8 hours from the following. Students must select at least one advanced methods elective.		
PA 402	Introduction to Data Management and Analysis	
PA 403	Economics for Management and Policy <sup>a</sup>	
PA 422	Project Management	
PA 432	Management of Information Technology	
PA 521	Strategic Management: Planning and Measurement	
PA 526	Public Policy Analysis	
PA 539	Public Procurement and Contracting	
PA 542	Advanced Data Analysis II <sup>a</sup>	
PA 561	Intergovernmental Management	
PA 573	Development and Fundraising in Nonprofit Organizations	
PA 582	Survey Data Collection Methods: Theory and Practice	
PA 588	Applied Survey Sampling and Analysis	
POLS 553	Urban Public Policy	
UPP 462	Intermediate GIS for Planning and Policy <sup>a</sup>	
UPP 463	Complexity-based Models for Planning and Policy <sup>a</sup>	

UPP 464	Advanced Visualization Techniques <sup>a</sup>
UPP 465	Topics in Geospatial Analysis and Visualization
IDS 400	Programming for Data Science in Business
IDS 403	Information Security
IDS 470	Multivariate Analysis <sup>a</sup>
IDS 472	Business Data Mining <sup>a</sup>
IDS 500	Information Systems in Organizations
IDS 509	Foundations of Analytics and AI for Supply Chain and Operations Management <sup>a</sup>
IDS 521	Advanced Database Management
IDS 560	Analytics Strategy and Practice <sup>a</sup>
IDS 567	Business Data Visualization
IDS 575	Machine Learning and Statistical Methods for Business Analytics
IDS 576	Deep Learning and Modern Applications <sup>a</sup>
<b>Internship or Professional Project (3 hours)</b>	
PA 595	Internship in Civic Data and Technology
PA 592	Professional Portfolio
OR	
PA 589	Civic Analytics Capstone
PA 592	Professional Portfolio

The internship and capstone courses can be waived for those with professional experience or demonstrated competence, as evaluated by the MSCA Director of Graduate Studies. Students waived of this requirement must replace the course with an equivalent number of elective hours to meet degree requirement. All students are required to complete PA 592.

<sup>a</sup> *Students must select one advanced methods elective. This course fulfills that requirement.*

- **Comprehensive Examination:** None
- **Thesis, Project, or Coursework-Only Options:** Coursework only. No other options available.