

PROGRAM POLICY STATEMENT FOR THE  
MASTER OF ARTS IN URBAN ANALYTICS & POLICY  
BIDEN SCHOOL OF PUBLIC POLICY & ADMINISTRATION  
October 2023

## SECTION 1 – CONTEXT AND OVERVIEW

### *Biden School Mission Statement*

The Master of Arts in Urban Analytics & Policy is an interdisciplinary degree based on the development of skills in critical and inferential thinking, quantitative reasoning, analytic methodology, concept integration, rigorous examination of the conditions of society, articulation of the consequences and implications of changes to public policy, and effective communication of findings to the policy world through data analytics and visualization. The context of the program is distinctively urban. It seeks to graduate individuals who combine skills in data analytics and urban data science with urban policy theory to work in a variety of policy analysis/planning positions. The degree can also prepare individuals for further graduate work at the doctoral level.

### *Degrees Offered*

The Biden School of Public Policy and Administration offers both graduate and undergraduate degrees. The undergraduate programs are the Bachelor of Arts in Public Policy and the Bachelor of Science in Leadership. The doctoral graduate programs are: Doctor of Philosophy in Public Policy & Administration; Doctor of Philosophy in Disaster Science & Management; Doctor of Philosophy in Energy & Environmental Policy; Doctor of Philosophy in Engineering & Public Policy, offered in partnership with the College of Engineering; Doctor of Philosophy in Education & Social Policy, offered in partnership with the College of Education and Human Development. The masters programs are: Master of Arts in Urban Analytics & Policy; Master of Public Administration; Master of Science in Disaster Science & Management; Master of Public Policy; Master of Public Health; Master of Energy and Environmental Policy.

### *Master of Urban Analytics & Policy (MA UAP) - Overview*

The Master of Arts in Urban Analytics & Policy program provides students with the skills to apply data science and analytics techniques and methodologies to address many of the critical challenges facing urban communities including sustainability, climate change, energy use, social justice, health and healthcare, education, housing, and poverty. The program is fundamentally interdisciplinary and approaches the understanding of cities as complex systems consisting of three core components: the human, built, and natural environments. Those components interact in a variety of dynamic ways that give rise to the rich tapestry of urban life. We equip our students with the diverse knowledge and technical skills needed to address policy challenges from data-informed and evidence-based vantage points with a focus on urban science, urban planning, economic growth, urban metabolism, data ethics and AI, and transportation and mobility. Our educational model supports active, experiential learning at all stages. Students work side-by-side with faculty on urban and policy research and analysis designed to create and utilize knowledge that informs decisions and policies. Our faculty and students are focused on making a positive impact on the quality of life in the communities they serve, forming a bridge between the communities of ideas and the community of action. The program develops a set of technical skills including statistical methods, computer coding, data visualization, quantitative reasoning,

geospatial statistics and GIS, and social science implementations of the scientific method that provide the foundation for addressing urban problems through the lens of data science and analytics. M.A. students are invited to participate in real world projects, enriching and applying what they learn in the classroom while they gain valuable practical experience that will help them launch productive careers.

The M.A. in Urban Analytics & Policy is administered by the program director operating under guidance specified in the document "Academic Reorganization of the College of Urban Affairs and Public Policy".

## **SECTION 2 - DEGREE REQUIREMENTS**

**CREDITS:** Students must complete 36 credit hours of graduate work. All students are required to attain a grade of B- or better in all courses counted towards the Masters of Urban Analytics & Policy degree. In accordance with University policy, students must also maintain a minimum cumulative grade point average of 3.0.

**REQUIRED CORE COURSES:** Students take the following two courses which together provide an introduction and overview of the two foundational aspects of the program, analytics and urban policy:

SPPA 721 - Data Science Tools for Evidence-based Policy (3 credits)  
UAPP 703 - Urban Society & Public Policy (3 credits)

Students also take the following three analytic methodology courses:

SPPA 722 - Machine Learning for Public Policy (3 credits)  
GEOG 670 - Geographic Information Systems and Science (3 credits)  
UAPP 702 - Research Methods for Urban & Public Policy (3 credits) OR  
UAPP 693 - Economics in Public & Non-Profit Sectors (3 credits) OR  
UAPP 691 - Quantitative Analysis in Public & NP Sectors (3 credits)

and the following three urban policy/theory courses:

UAPP 613 - Planning Theory & Urban Policy (3 credits)  
PHIL 655 - Ethics in Data Science and AI  
UAPP 649 - Civil Rights Law & Policy (3 credits) OR  
ENEP 824 - Sustainable Energy Policy and Planning (3 credits) OR  
UAPP 706 - Planning Sustainable Communities and Regions (3 credits) OR  
ENEP 821 - Technology, Environment, and Society (3 credits)

where the choice of fourth required course in each foundational pillar is designed to allow flexibility for curricular emphasis by the student with respect to policy application.

**AREA OF FOCUS: (6 credits)**

Students will take 6 credits of additional coursework that collectively define an area of focus. Faculty will pre-define several areas in which the School has strength, but students are also free to develop their own area of focus with the advice and consent of their academic advisor. The initial pre-defined areas of focus include: urban and regional planning, urban data science, energy and environment, urban economics, housing and community development, health services- policy, nonprofits and philanthropy, historic preservation, and media and public policy. Information on courses offered in these areas of focus is available in the Biden School Administration Office and on the School website.

**MA CAPSTONE COURSE: (6 CREDITS)**

The Capstone course (UAPP 714 - Policy Studio) will consist of a two-semester project that addresses modern policy and administration problems through the lens of urban analytics, urban informatics, and urban data science. These individual or group projects will be scoped with public, private, and academic sector partners and include the analysis of urban data sets for decision making, problem solving, and evidence-based public policy and management. Upon completion of the Capstone course, students will have both gained the experience of direct application of applied analytics to cities and produced a tangible output that can serve as a demonstration to the broader community of the skills acquired in the MA program.

For students also pursuing the Historic Preservation Certificate (see below), the Capstone course will consist of a research or field-based project that focuses on a current issue in historic preservation, placing it within the context of urban analytics and policy. The project can either be an individual or a group project but must involve solving a real-world problem in historic preservation policy, drawing on a variety of skills such as architectural documentation, historic resource evaluation, archival research, GIS, or policy development. For students also pursuing the Urban Data Science Certificate (see below), the project will involve increased focus on large data sets, computation, technology-driven solutions, data ethics, and bias.

**CERTIFICATE IN HISTORIC PRESERVATION**

Students may choose to complete a 12 credit Certificate in Historic Preservation as part of the MA in Urban Analytics and Policy degree. The certificate has two required core courses which can be taken as Area of Focus electives in the MA curriculum:

- UAPP 629: Historic Preservation Theory and Practice (3 credits)
- UAPP 630: Methods of Historic Preservation (3 credits)

The certificate requires two elective courses. This requirement may be satisfied with two Urban Policy courses from the MA curriculum:

- UAPP613: Planning Theory & Urban Policy (3 credits)
- UAPP706: Planning Sustainable Communities and Regions (3 credits)

**CERTIFICATE IN URBAN DATA SCIENCE**

Students may choose to complete a 12 credit Certificate in Urban Data Science as part of the MA in Urban Analytics and Policy degree. The certificate has three required core courses that are satisfied by courses in the MA in Urban Analytics and Policy degree curriculum:

- SPPA 721: Data Science Tools for Evidence-based Policy
- SPPA 722: Machine Learning for Public Policy

- UAPP 613: Planning Theory & Urban Policy  
*OR*

UAPP 703: Urban Society & Public Policy.

The certificate requires 3 credits of elective courses from the approved list of courses for the Graduate Certificate in Urban Data Science.

**WAIVERS OF REQUIRED COURSES**

Courses required in the M.A. may be waived if comparable courses or the requisite skills are, or will be, acquired elsewhere under an approved plan of study. To waive a required course, a student must have a petition to waive approved and signed by their advisor and a person currently responsible for teaching a course. A record of the signed waiver shall be sent to the program director and included in the student's file. Students must petition to substitute one course for each one that is waived. Waivers cannot be used to reduce the total number of credit hours (36) required for the completion of the M.A. degree. The petition must be approved by the student's advisor and a record of the substitution sent to the program director to be included in the student's file.

With the approval of the Urban Analytics & Policy program director, a maximum of 6 credits may be waived for a matriculating student in the M.A. program who has completed graduate level M.A. courses with a grade of “B” or higher in an urban analytics and policy or equivalent program as part of their undergraduate program so long as those credits were not used to satisfy the requirements of a previous degree program.

**SECTION 3 - ADMISSIONS POLICY AND PROCEDURES**

The purpose of the admissions criteria is to identify those applicants who can benefit from, and make a distinct contribution to the graduate programs in the School of Public Policy & Administration. Applicants are sought who show promise of constructive involvement with faculty, staff, and other students in instruction, research, and public service. Consideration is also given to the student's potential for successful completion of their graduate program.

Given its mission, the School seeks students with a mix of interests, backgrounds, and areas of competence and among whose goals is to do research in urban analytics and policy. To meet its academic and research goals as well as to be responsive to the multicultural backgrounds of prospective students, the Biden School of Public Policy & Administration employs a wide spectrum of criteria in assessing a prospective student's motivation, interest, and ability to perform successfully. No one criterion is the sole basis of an admissions decision. (Approved by Academic Council 7/30/86).

**M.A. ADMISSIONS**

M.A. admissions criteria and indicators of these criteria are listed below.

<b>Criteria</b>	<b>Indicators and Sources</b>
Genuine interest and motivation to pursue graduate study in public administration/urban affairs and public policy; personal objectives,	Statements by candidate in admission application and/or subsequent communications; personal interviews

aspirations, and plans are well formulated and coherent.	(telephone conversations when personal interviews are not possible) with members of the M.A. faculty and the Admissions Committee.
Genuine interest and promise in applying data analytics to problems of urban affairs through the use of analysis tools including computer programming and analytic software.	Review of undergraduate experience with data analysis and/or introductory statistics as well as statements by the candidate in admission application.
Expectations of sound academic performance in graduate level work	Review of undergraduate achievement and any previous graduate level work. Particular emphasis on assessing achievement in the context of the quality of the institutions candidate has attended and the trends or patterns in achievement in the last 1 - 2 years of applicant's program. Letters of recommendation from faculty; reports/papers written by candidate (published or unpublished).
Ability to apply previously acquired competencies to problem areas, community, or organizational needs.	Contributions in and nature of professional work experience, volunteer service and/or internships. Assessments by faculty, professionals, and/or community leaders.

**TOEFL SCORES:** International applicants must demonstrate a satisfactory command of English, particularly if English is not their first language. The TOEFL (Test of English as a Foreign Language) is required of all international applicants. A minimum score of 600 (paper-based) or 100 (TOEFL iBT) is usually required for consideration for admission. TOEFL scores are viewed in the context of the applicant’s complete record.

**ADMISSIONS COMMITTEE**

Applications for the M.A. program are assessed by an admissions committee. The committee is appointed by the Dean of the Biden School. The committee is composed of between 2-4 faculty members. Recommendations concerning admissions are transmitted to the Office of Graduate Studies by the program director.

**SECTION 4 - ADVISEMENT, EVALUATION, AND EXAMINATIONS**

One or more members of the faculty share the advising of all incoming M.A. students and monitor the progress and performance of students during the first semester of full-time study. The student's advisor is responsible for monitoring student progress and performance on a regular basis until the completion of all degree requirements. The student prepares a plan of study that is approved by the advisor and that plan becomes the basis for monitoring progress throughout the program.

All candidates for the M.A. degree are expected to maintain a minimum of a 3.0 cumulative index out of a possible 4.0. The grades of all students in the M.A. program are reviewed after each semester by the program director. In cases of substandard performance, actions are initiated in accord with general University guidelines regarding warning, probation, and termination. A

decision to recommend to the Graduate College to terminate a student requires the review and confirmation of a majority of the Biden School of Public Policy & Administration faculty. In addition to these procedures, at the end of each academic year the program faculty convenes to review the progress and performance of students in the program and to take appropriate action in cases of substandard performance.

## **SECTION 5: FINANCIAL AID**

Financial aid is available to MA students in the form of graduate assistantships, research assistantships, and tuition scholarships. The primary type of aid awarded is research assistantships (RAs) provided to those students working on public service or research projects in one of the Biden School's affiliated centers, with a faculty members or other University office. Awards are competitive and merit-based.

## **SECTION 6: ASSOCIATED 4+1 PROGRAMS**

Admission to the M.A. program in Urban Affairs & Public Policy can be achieved through the associated 4+1 programs. In every program, the student will complete their undergraduate program before embarking on the graduate year (the "plus one"). The 4+1 students will complete the full 36 credits of the M.A. program. Students in all the associated 4+1 programs have several modifications to their undergraduate degree so MA coursework will "double count" for both degrees. Per UD Graduate College guidelines, 4+1 MA students can "double count" a maximum of 12 graduate credits towards the MA.

### **Advisement of 4+1 Students**

During the undergraduate portion of the program, students will be assigned a faculty member teaching in their major as their advisor. Students would apply to the '4+1' MA program after the completion of 60 credits, which is typically in the fall of the 3rd year. Through the application process, the student prepares a plan of study and that plan becomes the initial basis for monitoring progress throughout the program.

After the student is admitted to the 4+ 1 program, students will be appointed an MA advisor. Students in the '4+1' programs will typically be enrolled full-time throughout both degree programs. The MA advisor is responsible for monitoring student progress and performance on a regular basis until the completion of all degree requirements. MA courses would be introduced incrementally to the student's program for the remainder of their 3rd and 4th years. Full-time MA study should commence in the 5th year. Sequencing and timing of courses should be discussed closely and frequently with the MA advisor. Full-time study for BA students is at least 12 credits per semester, typically 15-16 credits. Full-time study for an MA student is typically 9 credits per semester:

### **4+1 PROGRAM: B.A. IN PUBLIC POLICY/M.A. IN URBAN AFFAIRS AND PUBLIC POLICY (BA-MA)**

Students admitted to the 4+1 accelerated, combined program will complete all requirements for the B.A. in Public Policy and the degree requirements for the MA. Admitted students will enroll

in the 600 and 700 level sections of 400 level courses that already are part of the concentrations in the Public Policy major. During the second semester of the junior year and throughout the senior year, students must enroll in a minimum of 12 credits of 600 and 700 level sections; these are the same sections required for first-year students in the M.A. in Urban Affairs and Public Policy.

These courses will prepare students for research in a specialized area in the fifth year of study. After senior year, students will immediately begin taking the remaining graduate credits over a 1-year period.

#### **4+1 PROGRAM: B.A. IN ENGLISH/M.A. IN URBAN AFFAIRS AND PUBLIC POLICY (BA-MA)**

Students admitted to the 4+1 Program must complete the degree requirements of the Bachelor of Arts degree in English and the degree requirements of the MA. They will complete the 18-credit minor in Public Policy involving UAPP 110: Changing the World; UAPP 225: Crafting Public Policy; and UAAP 325: Public Policy Analysis; and in consultation with an advisor from Public Policy will take three additional courses selected from the public policy concentrations.

English majors may apply to 4+1 accelerated, combined program after completing 60 credit hours. This is typically in the Fall semester of their Junior Year. The completed application will be reviewed by the admissions committee for the MA in Urban Affairs and Public Policy.

Students admitted to the 4+1 accelerated, combined program will complete all requirements for the BA in English prior to the start of their fifth year of study.

#### **4+1 PROGRAM: B.A. IN ART HISTORY/M.A. IN URBAN AFFAIRS AND PUBLIC POLICY (BA-MA, HBA-MA)**

Students admitted to the 4+1 program must complete the requirements of the Bachelor of Arts in Art History or the Honors Bachelor of Arts in Art History and the degree requirements of the MA. Art History majors may apply to the 4+1 program after completing 60 credit hours, typically in the Fall semester of their Junior Year. An undergraduate GPA of 3.3 or higher is required.

There are 12 credits of graduate level courses that may be double counted across both programs. Nine credits of UAPP graduate-level courses taken by students after they are already admitted to the 4 + 1 program may double count as the required 9 credits of ARTH-related coursework and, upon the approval of the art history advisor, additional 3 credits of UAPP graduate-level course(s) taken in the senior year may also double count as 3 credits of ARTH's related work on historical and cultural change. (The 12 credits of ARTH related coursework do not count toward ARTH major, but they are required as related work for ARTH BA.)

Students admitted to the 4+1 program will complete all requirements for the BA in Art History prior to the start of their fifth year of study.

### **SECTION 7: PROGRAM ASSESSMENT**

The MA program is reviewed regularly by the MA director, the MA program committee, the Dean of the Biden School and the faculty and staff of the Biden School to assure that the program is meeting its objectives and effectively serving our students.