Master of Science (MS) in Social Data Analytics and Research*

36 semester credit hours minimum

Faculty

Professors: Patrick T. Brandt, Kurt J. Beron, Harold D. Clarke, Euel W. Elliott, Daniel A. Griffith, Donald A. Hicks, Dong Li, Robert C. Lowry, Alex R. Piquero, Fang Qiu, Donggyu Sul

Associate Professors: Bobby C. Alexander, Simon M. Fass, Seth Giertz, Dohyeong Kim, Tomislav V. Kovandzic, Meghna Sabharwal, Michael R. Tiefelsdorf

Clinical Associate Professor: Karl K. Ho

Assistant Professors: Rodney Andrews, Monica Deza, Vito D’Orazio, Evgenia Gorina, Asli Leblebicioglu

Clinical Assistant Professor: Timothy M. Bray

Mission

The mission of the Master of Science (MS) in Social Data Analytics and Research is to equip individuals with rigorous multi-disciplinary proficiency in methods of social data production, collection and investigation for which there is strong and increasing career demand by the public, nonprofit and private sectors, and by doctoral programs and other advanced research organizations.

The MS in Social Data Analytics and Research endows students with clear understanding of the contributions that rigor makes to creation, assembly, interpretation and analysis of social science data. It encourages reflection on core methods, theories and philosophical dimensions of social science practice. It fosters appreciation of the importance of applied social science in helping to shape public policy and action through participation in formation of new policies and programs or evaluation of strategies and interventions underway.

The MS in Social Data Analytics and Research orients itself to students wanting to apply social science concepts, principles and methods to a broad range of questions in research-related and other professional engagements in government, nonprofit and private sector settings that rely on social data for answers.

Objectives

Graduates of the program will:

- Rigorously apply methods of social science research design and evaluation, including quantitative (e.g., experimental, quasi-experimental and naturalistic) and qualitative approaches in varied public, non-profit and private sector settings;

- Skillfully employ quantitative and qualitative analysis methods for social science data used in research by different types of public, non-profit and private sector organizations, and as appropriate understand and analyze large data sets;
Harness acquired skills and capabilities in practice to sustain public, nonprofit and private sector organizations as they address pressing societal issues on both local and global scales;

Interpret core theories and philosophical dimensions of social science practice, and promote ethical use of social science methodology;

Justify the importance of applied social science in helping to shape public policy and action;

Successfully build career paths in fields applying social data analytics and research.

Facilities
Students have full access to four state-of-the-art computer laboratories housed in the School of Economic, Political and Policy Sciences. Open for extended hours including evenings and weekends, each laboratory is equipped with full multimedia systems and contains 24 to 30 computers. All computers are network linked and hold full suites of leading survey, qualitative, spatial and statistical analysis software, including Qualtrics, NVivo, ArcGIS, ENVI, EViews, R, STATA and SAS. The University’s computer labs also provide desktop computers and UNIX workstations for student use throughout the campus. These include computing facilities in the Erik Jonsson School of Engineering and Computer Science and in the NASA Center for Excellence in Remote Sensing in the Department of Geosciences. Key data sources and reference materials are readily available online through the University library and the School’s memberships in various professional organizations.

Admission Requirements
The University’s general admission requirements are discussed on the Graduate Admission page (catalog.utdallas.edu/2017/graduate/admission). The MS in Social Data Analytics and Research invites applications from students with a baccalaureate degree from an accredited higher education institution. Every application receives an all-inclusive review. In general, entering students should have earned a minimum 3.0 undergraduate Grade Point Average (GPA) on a 4.0-point scale, a verbal score of 150 and a quantitative score of 150 on the Graduate Record Examination (GRE). In addition to standardized test scores, which are only one of several factors taken into account in determining admission, students should submit all transcripts, three letters of recommendation and a one-page essay outlining the applicant’s background, education and professional objectives.

Prerequisites
There are no specific prerequisites for admission to the MS in Social Data Analytics and Research. Several required courses, however, demand satisfactory prior completion of undergraduate college algebra and/or calculus.

Grading Policy
In order to qualify for graduation, students must maintain a minimum 3.0 grade point average in their degree program’s core courses plus an aggregate grade point average of 3.0 for all graduate courses taken in the student’s degree program at UT Dallas.
Degree Requirements
The University's general degree requirements are discussed on the Graduate Policies and Procedures page (catalog.utdallas.edu/2017/graduate/policies/policy). Students seeking the MS in Social Data Analytics and Research must complete at least 36 semester credit hours of graduate coursework in the program and maintain at least a 3.0 (B) grade point average in order to graduate.

The program has three components: Required Core Courses (15 semester credit hours), Prescribed Analytical Electives (12 semester credit hours) and Prescribed Disciplinary Electives (9 semester credit hours), as follows:

I. Required Core Courses: 15 semester credit hours
EPPS 6302 Methods of Data Collection and Production
EPPS 6311 Research Practice in the Social Sciences
PPPE 6310 Research Design I
EPPS 6313 Introduction to Quantitative Methods
   or EPPS 7313 Descriptive and Inferential Statistics
EPPS 6316 Applied Regression
   or EPPS 7316 Regression and Multivariate Analysis

1. Prerequisite is College Algebra. 2. Prerequisite is Calculus

In special circumstances, students may substitute alternative equivalent courses in the core with prior approval of the Program Director or the Associate Dean for Graduate Programs.

II. Prescribed Analytical Electives: 12 semester credit hours
Students complete twelve semester credit hours in ONE of the following analytical modules (Data Collection, Production and Management; Quantitative Methods; Qualitative Methods; Design and Evaluation; and Spatial Analytics. The Program Director or the Associate Dean for Graduate Programs must approve course selection within each module.

Module 1: Data Collection, Production and Management
EPPS 6323 Knowledge Mining
EPPS 6324 Data Management for Social Science Research
EPPS 6354 Information Management
EPPS 7386 Survey Research
GISC 5322 GPS (Global Positioning System) Satellite Surveying Techniques
GISC 5324 3D Data Capture and Ground LiDAR
GISC 6325 Remote Sensing Fundamentals
GISC 6381 Geographic Information Systems Fundamentals
GISC 6384 Advanced Geographic Information Systems
GISC 7365 Advanced Remote Sensing
PSCI 6364 Public Opinion and Survey Research

Module 2: Quantitative Methods
ECON 6305 Mathematical Economics
ECON 6306 Applied Econometrics
ECON 6309 Econometrics I
III. Prescribed Disciplinary Electives: 9 semester credit hours
Students complete nine semester credit hours in ONE of the following disciplinary domains (Criminology, Geospatial Information Sciences, Economics, Political Science, Public/Nonprofit Management, Public Policy/Political Economy or Sociology) with courses prescribed by the respective EPPS Programs. The Program Director or the Associate Dean for Graduate Programs must approve course selection.

Criminology:
CRIM 6303   Etiology of Crime and Criminality
CRIM 6311   Crime and Justice Policy
CRIM 6314   Policing
CRIM 6315   Violent Crime

Geospatial Information Sciences:
CRIM 6332/GISC 6331   GIS Applications in Criminology
GISC 6325   Remote Sensing Fundamentals
GISC 6382  Applied Geographic Information Systems
GISC 6385  GIS Theories, Models and Issues
GISC 7364  Demographic and Epidemiological Analysis and Modeling
GISC 7366  Applied Remote Sensing

Economics:
ECON 5321  Microeconomic Theory for Applications
ECON 5322  Macroeconomic Theory for Applications
ECON 5326  Managerial Economics
ECON 5397  Special Topics in Economics
ECON 6320  Game Theory for the Social Sciences
ECON 6344  Transfer Pricing

Political Science:
PSCI 6311  Proseminar in Law and Courts
PSCI 6319  Proseminar in International Relations
PSCI 6321  Proseminar in Comparative Politics
PSCI 6347  Proseminar in Political Institutions and American Politics

Public/Nonprofit Management:
PA 6311  Public Management
PA 6313  Public Policymaking and Institutions
PA 6320  Organizational Theory
PA 6321  Government Financial Management and Budgeting
PA 6345  Human Resource Management
PA 6382  Nonprofit Management

Public Policy/Political Economy:
PPPE 6301  Political-Economic Theories
PPPE 6329  Ethics, Culture and Public Policy
PPPE 6340  Domestic Social Policy
PPPE 6352  World Political Economy
PPPE 6354  Theories and Issues of Development

Sociology:
SOC 6312  Social-Economic Theories
SOC 6344  Gender and Policy
SOC 6347  Religion in Public Life
SOC 6348  Immigration Policy
SOC 6350  Social Stratification
SOC 6355  Race and Ethnic Relations

*Pending final approval by the UT Dallas academic governance committees.