DATA ANALYTICS & QUANTITATIVE ANALYSIS

The specialization in Data Analytics and Quantitative Analysis (DAQA) provides opportunities to pursue advanced work in computational and data analytics, econometrics and quantitative analysis and to apply these techniques to a broad array of policy and management issues.

Contact Us
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Sandra E. Black, Professor of Economics and of International and Public Affairs
Nelson Colon, Lecturer of International and Public Affairs (part-time)
Aidan Feldman, Lecturer of International and Public Affairs (part-time)
Poranee 'Pam' Kingpetcharat, Lecturer of International and Public Affairs (part-time)
Rebecca Krisel, Lecturer of International and Public Affairs (part-time)
Emmanuel Letouze, Adjunct Associate Professor of International and Public Affairs
Sameer Maskey, Adjunct Associate Professor of International and Public Affairs
Tamar Mitts, Assistant Professor of International and Public Affairs
Suresh Naidu, Professor of International and Public Affairs
Sharyn O'Halloran, George Blumenthal Professor; Professor of International and Public Affairs (on leave)

International Economic Policy Concentration Students
Due to International Economic Policy requiring SIPA U6501 as a core course, students in this concentration must instead take an additional DAQA elective course to fulfill specialization requirements for a total of 9 credits in DAQA electives:

• 3 credits in an Advanced Course
• 6 credits in electives approved by the Specialization Director

SIPA Students Matriculated Prior to Fall 2022
Continuing DAQA students can choose any course from the Advanced Course and SIPA Electives course lists respectively to their Data Analytics or Quantitative Analytics Focus Area to fulfill their credit requirements.

Required Course
SIPA U6501 Quantitative Analysis II for International and Public Affairs 3.00

Quantitative Analysis Focus Area

Advanced Courses Points
INAF U6503 Applying Machine Learning 3.00
INAF U6599 Quant III: Labor Economics For Policy Students 3.00
INAF U6604 Applied Econometrics 3.00
INAF U6608 Economics of Education Policy 3.00
INAF U6614 Data Analysis for Policy Research Using R 3.00

in SIPA U6400 and SIPA U6500. It is strongly recommended that students complete SIPA U6500 during their first semester.

Questions should be directed to Marie Gugnishev, Coordinator of the DAQA Specialization, at mg4441@columbia.edu.

DAQA Pre-Requisites
• SIPA U6400 Microeconomic Analysis for International and Public Affairs*
• SIPA U6401 Macroeconomic Analysis for International and Public Affairs
• SIPA U6500 Quantitative Analysis I for International and Public Affairs*

*Minimum grade requirement of B-

DAQA Requirements
• SIPA U6501 Quantitative Analysis II for International and Public Affairs
• 3 Credits of an Advanced Course
• 3 Credits of electives approved by the Specialization Director
INAF U8145  Advanced Economic Development for International Affairs  3.00
INAF U8305  Conducting Empirical Research in Economics  3.00
INAF U8360  Economic Measurement of Discrimination  3.00
PEPM U6640  Macroeconometrics  3.00
PUAF U8516  Time Series Analysis  3.00
SIPA U8500  Quantitative Methods in Program Evaluation and Policy Research  3.00

**SIPA Electives**
INAF U6016  Cost-Benefit Analysis  3.00
INAF U6098  Financial Risk Management and Public Policy  3.00
INAF U6301  Corporate Finance  3.00
INAF U6326  Renewable Energy Project Finance Modeling  3.00
INAF U6508  Using Big Data to Develop Public Policy  3.00
INAF U6511  Intro to Infographics and Data Visualization  1.50
INAF U6512  Data Driven Approaches for Campaigns and Advocacy  3.00
INAF U6514  Text as Data  3.00
INAF U6858  Using Big Data to Develop Public Policy  3.00
INAF U6600  Testing Models of Public Policy Making  3.00
INAF U6614  Data Analysis for Policy Research Using R  3.00
INAF U6889  Impact Evaluation: Driving Evidence-Based Development and Humanitarian Aid  3.00
INAF U6958  Gender Data for Gender Equality  1.50

**Non-SIPA Courses**
Courses offered at affiliate Columbia Schools. Please see Cross-Registration instructions to register. Courses not listed must be approved by the DAQA Director. Enrollment is not guaranteed.
ACTU K5841  Data Science in Finance and Insurance  3.00
QMSS GR5073Q  Machine Learning for the Social Sciences  3.00

**Computational and Data Analysis Focus Area**

**Advanced Courses**
INAF U6006  Computing in Context  3.00
INAF U6503  Applying Machine Learning  3.00
INAF U6506  Data Science # Public Policy  3.00
INAF U6514  Text as Data  3.00
INAF U6600  Testing Models of Public Policy Making  3.00
INAF U6614  Data Analysis for Policy Research Using R  3.00
PUAF U8516  Time Series Analysis  3.00

**SIPA Electives**
INAF U6004  Application Development for Social Impact  1.50
INAF U6005  Generative AI  1.50
INAF U6009  Artificial Intelligence in Public Policy  1.50
INAF U6098  Financial Risk Management and Public Policy  3.00

**Degree Audit Report**
Matriculated students in this program can view their degree audit report on Stellic.