MATHEMATICS SECOND MAJOR OR MINOR FOR MMSS STUDENTS

Students must also complete the Undergraduate Registration Requirement (https://catalogs.northwestern.edu/undergraduate/requirements-policies/undergraduate-registration-requirement/) and the degree requirements of their home school.

NOTE: This Catalog describes Weinberg College BA requirements that pertain to students who matriculated at Northwestern after spring quarter 2023. Refer to the Archives (https://catalogs.northwestern.edu/archives/) if you are following BA requirements described in the 2018-2019 through 2022-2023 editions.

Second Major in Mathematics for MMSS Majors

A student who has completed all of the requirements for an adjunct major in Mathematical Methods in the Social Sciences (MMSS) (https://catalogs.northwestern.edu/undergraduate/arts-sciences/mathematical-methods-social-sciences/) but not a major in a social science must satisfy the ordinary requirements for the mathematics major (https://catalogs.northwestern.edu/undergraduate/arts-sciences/mathematics/mathematics-major/) to earn an additional major in mathematics. Students may not count any 300 level mathematics course toward both the MMSS adjunct major and the mathematics major.

Third Major in Mathematics for MMSS Majors

A student who has completed all of the requirements for an adjunct major in Mathematical Methods in the Social Sciences (MMSS) (https://catalogs.northwestern.edu/undergraduate/arts-sciences/mathematical-methods-social-sciences/) and a major in a social science will satisfy the requirements for an additional major in mathematics by

- completing
  
  **Course** | **Title**
  ----------------- | ------------------
  MATH 226-0 | Sequences and Series

- completing 1 of the following course sequences:
  
  **Course** | **Title**
  ----------------- | ------------------
  MATH 320-1 | Real Analysis
  & MATH 320-2 | and Real Analysis
  & MATH 320-3 | and Real Analysis
  or MATH 321-1 | MENU: Real Analysis
  & MATH 321-2 | and MENU: Real Analysis
  & MATH 321-3 | and MENU: Real Analysis

- and completing 3 of the following courses:
  
  **Course** | **Title**
  ----------------- | ------------------
  MATH 300-0 | Foundations of Higher Mathematics
  or MATH 310-2 | Probability and Stochastic Processes
  or MATH 310-3 | Probability and Stochastic Processes
  or MATH 311-2 | MENU: Probability and Stochastic Processes
  or MATH 311-3 | MENU: Probability and Stochastic Processes
  or MATH 325-0 | Complex Analysis
  or MATH 330-1 | Abstract Algebra
  or MATH 330-2 | Abstract Algebra
  or MATH 330-3 | Abstract Algebra
  or MATH 331-1 | MENU: Abstract Algebra
  or MATH 331-2 | MENU: Abstract Algebra
  or MATH 331-3 | MENU: Abstract Algebra
  or MATH 334-0 | Linear Algebra: Second Course
  or MATH 344-1 | Introduction to Topology
  or MATH 344-2 | Introduction to Topology
  or MATH 360-1 | MENU: Applied Analysis
  or MATH 360-2 | MENU: Applied Analysis
  or MATH 366-0 | Mathematical Models in Finance
  or MATH 368-0 | Introduction to Optimization

Students may not count any 300 level mathematics course toward both the MMSS adjunct major and the mathematics major.

See the Mathematics Major (https://catalogs.northwestern.edu/undergraduate/arts-sciences/mathematics/mathematics-major/) for further information regarding Honors in Mathematics, Graduate Study in Mathematics, and Secondary Teaching Licensure in Mathematics.

Minor in Mathematics for MMSS Majors

A student who has completed all of the requirements for an adjunct major in Mathematical Methods in the Social Sciences (MMSS) (https://catalogs.northwestern.edu/undergraduate/arts-sciences/mathematical-methods-social-sciences/) will satisfy the requirements for a mathematics minor by

- completing
  
  **Course** | **Title**
  ----------------- | ------------------
  MATH 226-0 | Sequences and Series

- and completing 1 of the following course sequences:
  
  **Course** | **Title**
  ----------------- | ------------------
  MATH 320-1 | Real Analysis
  & MATH 320-2 | and Real Analysis
  & MATH 320-3 | and Real Analysis
  or MATH 321-1 | MENU: Real Analysis
  & MATH 321-2 | and MENU: Real Analysis
  & MATH 321-3 | and MENU: Real Analysis

Students may not count any 300 level mathematics course toward both the MMSS adjunct major and the mathematics minor.