Penn
Department of Mathematics

Mathematics Minor Declaration Form Fillable PDF

Your Name

Your (8-Digit) PennID #

For the requirements below (note: there is a second page), list the semester and year taken and grade received (e.g., Fall 2022: A). In most cases, grades below C do not count towards the minor. If you have *not* satisfied a requirement, indicate which semester and year you plan to do so. If unsure about a requirement, leave it blank and briefly explain in the box at the bottom of the first page. Send your completed form to your advisor.

Calculus Requirement (3 CUs)

Math 1400 Calculus, Part I
Prereq: Math 1300
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

and one of

Math 1410 Calculus, Part II
Prereq: Math 1400
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

Math 1510 Calculus, Part II with Probability and Matrices
Prereq: Math 1400
Generally Offered: spring

semester&year taken + grade OR
semester&year planned

Math 1610 Honors Calculus
Prereq: Math 1400
Generally Offered: fall

semester&year taken + grade OR
semester&year planned

and one of

Math 2400 Calculus, Part III
Prereq: Math 1410
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

Math 2600 Honors Calculus, Part II
Prereq: Math 1410
Generally Offered: spring

semester&year taken + grade OR
semester&year planned

Electives

The Mathematics Minor is a 7 CU minor. The number of electives required to reach 7 CUs will vary. At most one AMOR course can count. See below or see our website for rules.

course department, number, and name — semester&year taken + grade OR semester&year planned

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course department, number, and name — semester&year taken + grade OR semester&year planned

course department, number, and name — semester&year taken + grade OR semester&year planned

course department, number, and name — semester&year taken + grade OR semester&year planned

Algebra Requirement (at least 1 CU)

Take at least one of the following courses. See below for additional rules and restrictions.

Math 3120 Linear Algebra
Prereq: Math 2400
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

Math 3130 Computational Linear Algebra
Prereq: Math 2400
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

Math 3140 Advanced Linear Algebra
Prereq: Math 2400
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

Math 3500 Number Theory
Prereq: None
Generally Offered: varies

semester&year taken + grade OR
semester&year planned

Math 3700 Algebra
Prereq: Math 2400 and 3140
Generally Offered: fall, spring

semester&year taken + grade OR
semester&year planned

Math 5020 Abstract Algebra
Prereq: Math 2400 or 2600 and Math 3140/5140
Generally Offered: fall
Permits required for undergraduates

semester&year taken + grade OR
semester&year planned

Other Information For Your Minor Advisor

Anything related to your math minor (e.g., transfer or placement credits, requirements you're unsure of, etc.)

To Be Completed By Minor Advisor

Advisors: For departmental records, please list all overrides or exceptions you have approved in the Comments/Notes box along with any other items or information which may be relevant.

Advisor Name	
Date	
Comments/Notes	

Additional Notes on the Algebra Requirement

Students who have already received credit for either Math 3700, 3710, 5020 or 5003 cannot receive further credit for Math 3120/3130/5130. Students can receive credit toward the minor for at most one of the four courses Math 3120/3130/3140/5130 because of the overlap in their content. Students who count both Math 3700 and Math 3710 toward a Math Minor cannot count any of Math 3120/3130/5130 toward a Math Minor.

Additional Notes on Electives

There are three different types of courses which may be counted as electives:

- **Mathematics Department Courses:** Math 2020 and any Math course numbered 3200 or higher which is not being counted towards another major requirement.
- **Courses with Attribute AMMR (Formerly known as "Electives Counting Inside Math Department"):** Any number of AMMR courses can count towards the minor, but several AMMR courses are sufficiently similar to one another that only one can count. Among the courses Math 4300, Stat 4300, CIS 2610, Econ 2300, ESE 3010, ENM 3750, and ENM 5030, at most one can be counted by virtue of its AMMR status. A second course in this list can be counted as an AMOR course (provided that it does not exceed the total limit on AMOR courses). In these rules, Stat 5100 can count as a substitute for Math 4300 or Stat 4300 and Stat 5110 can count as a substitute for Stat 4310.

  Some examples of AMMR courses include STAT4300, Stat 4300, Stat 4320, Stat 4330, Stat 5120, Stat 5410, ESE 2100, ESE 3010, ESE 3250, Econ 2300, Biol 4231, Biol 4235, CIS 2610, CIS 2620, CIS 5110, ESE 5030, ESE 6740, ENM 2510, ENM 3210, ENM 3750, ENM 5030. See Path@Penn for official listings.
- **Courses with Attribute AMOR (Formerly known as "Cognates"):** At most one AMOR course can count towards the minor. Some examples of AMOR courses include Astr 1211, Astr 1212, Biol 4612, Biol 4536, Biol 5536, Biol 4510, Biol 5860, CIS 3200, CIS 1100, CIS 1200, CIS 1210, Econ 2310, Econ 4101, Econ 4210, Econ 4150, Econ 4320, MEAM 2100, MEAM 2110, ESE 4020, Phil 4723, Phil 6722, Phil 5710, Phys 0140, Phys 0150, Phys 0151, Phys 0170, Pys 0171, Stat 4310, Stat 4760. See Path@Penn for official listings.