

Suggested Courses for a Minor in Mathematics

A mathematics minor consists of the MATH 240-245 sequence plus 3 more courses at the 300 or 400 level in mathematics or statistics (excluding STAT 402). However, a minor should be more than just a note on the transcript and on the diploma. For each non-technology major (technology majors do not take MATH 240-245) offered in the College of Engineering and Science and for some possible career tracks, the table below gives sensible suggestions which three courses could be taken for a mathematics minor. Behind each course, in parentheses, is the quarter in which the course is typically offered.

Note that the suggestions below are not mandatory for each major in question. They were simply determined to be a very good fit by faculty in the program in question.

For more information about a minor or major in mathematics, as well as for information about courses that are offered less frequently, please contact the program chair of the Program of Mathematics and Statistics.

Major	Suggested (NOT mandatory) Courses
Biomedical Engineering	<ul style="list-style-type: none"> • MATH 407 Partial Differential Equations (Fall) and one of the following combinations of two: <ul style="list-style-type: none"> • MATH 308 Introduction to Linear Algebra (Winter) and MATH 415 Numerical Analysis (Winter), or • MATH 308 Introduction to Linear Algebra (Winter) and STAT 405 Statistical Methods (any quarter), or • MATH 414 Numerical Analysis (Fall) and MATH 415 Numerical Analysis (Winter)
Chemical Engineering	Three courses from among the following: <ul style="list-style-type: none"> • STAT 405 Statistical Methods (any quarter) • MATH 407 Partial Differential Equations (Fall) • MATH 414 Numerical Analysis (Fall) • MATH 415 Numerical Analysis (Winter) • MATH 308 Introduction to Linear Algebra (Winter) • MATH 405 Linear Algebra (Spring)
Chemistry	<ul style="list-style-type: none"> • MATH 308 Introduction to Linear Algebra (Winter) • MATH 405 Linear Algebra (Spring) • MATH 407 Partial Differential Equations (Fall) Student and advisor can identify other courses appropriate for the student.
Civil Engineering	Three courses from among the following: <ul style="list-style-type: none"> • MATH 308 Introduction to Linear Algebra (Winter) • MATH 405 Linear Algebra (Spring) • MATH 407 Partial Differential Equations (Fall) • MATH 414 Numerical Analysis (Fall) • MATH 415 Numerical Analysis (Winter) • STAT 405 Statistical Methods (any quarter)

Major	Suggested (NOT mandatory) Courses
Computer Science	<ul style="list-style-type: none"> • MATH 243-245 (not required in CSC curriculum) • MATH 311 Discrete Mathematics (Fall or Spring, required in CSC) or MATH 307 Fundamentals of Mathematics (Spring) • STAT 405 (any quarter, required in CSC) Plus one of <ul style="list-style-type: none"> • MATH 308 Introduction to Linear Algebra (Winter) • MATH 414 Numerical Analysis (Fall) • MATH 435 Graph Theory (Winter) • MATH 408 Abstract Algebra (Fall, check with program chair for eligibility) • MATH 460 Number Theory (if offered)
Electrical Engineering	Three of the following <ul style="list-style-type: none"> • MATH 407 Partial Differential Equations (Fall) • MATH 414 Numerical Analysis (Fall) • MATH 415 Numerical Analysis (Winter) • STAT 405 Statistical Methods (any quarter) or, students interested specifically in digital electronics should take the three classes below. <ul style="list-style-type: none"> • MATH 311 Discrete Mathematics (Fall) • MATH 308 Introduction to Linear Algebra (Winter) • MATH 445 Complex Variables (Spring, if offered)
Industrial Engineering	<ul style="list-style-type: none"> • MATH 308 Introduction to Linear Algebra (Winter) • MATH 414 Numerical Analysis (Fall) • MATH 415 Numerical Analysis (Winter) or MATH 311 Discrete Mathematics (Fall)
Mechanical Engineering	<ul style="list-style-type: none"> • STAT 405 Statistical Methods (any quarter) • MATH 308 Introduction to Linear Algebra (Winter) • MATH 407 Partial Differential Equations (Fall)
Nanosystems Engineering	Three from among the following: <ul style="list-style-type: none"> • STAT 405 Statistical Methods (any quarter) • MATH 407 Partial Differential Equations (Fall) • MATH 414 Numerical Analysis (Fall) • MATH 415 Numerical Analysis (Winter) • MATH 308 Introduction to Linear Algebra (Winter) • MATH 405 Linear Algebra (Spring)
Physics	<ul style="list-style-type: none"> • MATH 308 Introduction to Linear Algebra (Winter) • STAT 405 Statistical Methods (any quarter) • PHYS 470C Mathematical Methods for Physics (Fall or Winter)

Area of Interest	Suggested (NOT mandatory) Courses
Mathematics Education	<ul style="list-style-type: none"> • MATH 307 Fundamentals of Mathematics (Spring) • MATH 408 Abstract Algebra (Fall) • MATH 401 College Geometry (Winter) or MATH 308 Introduction to Linear Algebra (Winter)
Pure Mathematics	<ul style="list-style-type: none"> • MATH 307 Fundamentals of Mathematics (Spring) • MATH 408 Abstract Algebra (Fall) • MATH 482 Introduction to Real Analysis (Winter)