

MATHEMATICS BS DEGREE REQUIREMENTS 2022/2023

OPTION II - APPLIED MATHEMATICS

Student name: _____ UNM ID: _____

Concentration: **Applied Mathematics** Minor (req): _____

Admitted to program on: _____ as a (circle one of) FR / SO / JR / SR .

Expected date of graduation: _____

Student's interests: _____

Completed Courses	Sem	Grade	Instructor	Pre-approved substitutions
Math 1512 (162) Calc 1				
Math 1522 (163) Calc 2				
Math 2531 (264) Calc 3				
Computing course at the level of ENG130L, CS 152L, PHYS 2415, or ECE 131L #1				
MATH 316 ODEs				
MATH 321 Lin Algebra				
Additional 300-level or above Math and Stat course #1				
MATH 311 or MATH 402				
MATH 312 PDEs				
MATH 313 Complex Var				
MATH 375 Num Computing				
MATH 401 Adv Calculus I				
One from 412, 441, 462, 463, 464, *471, 472 (if MATH402 is not taken) #1				

Applied Mathematics: MATH 311 or 402, **312, **313, **316, **375. Both 311 and 402 can be taken for credit. If 402 is not chosen, then the concentration must include one course from: **412, 441, 462, 463, 464, *471, 472. Students must also take one 300-level or above Mathematics and Statistics course, which must be 3-4 credit hours. Reference: <http://catalog.unm.edu/catalogs/2022-2023/colleges/arts-sciences/mathematics-statistics/undergraduate-program.html>

Notes: Fall only: Math 322, 431, 441, 462, 464, 471; Spring only: Math 319, 402, 412, 421, 463, 472 {Alternate Springs}; Offered upon demand: MATH 439. For graduation, students must have 27 upper

level math/stats credit hours.

Advisement History:

Date	Advised by	Semester	Recommended courses for semester

Registration History: (Math/Stats courses only)

Institution	Semester	Course	Grade	Instructor (if known)

Notes: _____

Minor Study Requirements

Minor in Mathematics

MATH 2530; 12 credit hours in Mathematics and Statistics courses numbered above 300. At least 6 of the 12 credit hours must be in courses labeled MATH. The Credit/No Credit grade option may not be used for minor study and the grades in all mathematics and statistics courses must be "C" (not "C-") or better. Courses required for a major may not be used to fulfill a minor requirement.

Minor in Statistics: Requirements for the Mathematics Major

MATH 1350 and 2530; STAT **345, 427, 428; an additional 3 credit hours of Statistics in courses numbered 300 and above. All 12 credit hours in courses 300-level and above must be in courses labeled STAT. The Credit/No Credit grade option may not be used for minor study and the grades in all statistics courses must be a "C" (not "C-") or better.

MATHEMATICS BS DEGREE REQUIREMENTS 2022/2023

OPTION IV - MATHEMATICS OF COMPUTATION

Student name: _____ UNM ID: _____

Concentration: **Mathematics of Computation** Minor (req): COMPUTER SCIENCE Admitted to program on: _____ as a (circle one of) FR / SO / JR / SR .

Expected date of graduation: _____

Student's interests: _____

Completed Courses	Sem	Grade	Instructor	Pre-approved substitutions
Math 1512 (162) Calc 1				
Math 1522 (163) Calc 2				
Math 2531 (264) Calc 3				
MATH 321 Linear Algebra				
Four from 312 , 316 , 317 , 319 , 322 #1				
#2				
#3				
#4				
One from MATH 441 or STAT 345 #1				
MATH 375 Intro Num Computing				
MATH 464 Appl Matrix				
MATH 471 Intro Scient Comp				
Computing course at the level of ENG130L, CS 152L, PHYS 2415, or ECE 131L #1				

Mathematics of Computation

- MATH **375, 441 or STAT **345, 464, *471; four courses from: MATH **312, **316, **317, **319, 322. Note that MATH 401 is not required for this concentration, but is recommended for students contemplating advanced study in mathematics.
- A minor in Computer Science, consisting of: CS 152L, 261, 251L, two courses from: CS 341L, 351L, 361L; ECE 238L. The Computer Science advisor may make exceptions where appropriate.

Reference: <http://catalog.unm.edu/catalogs/2022-2023/colleges/arts-sciences/mathematics->

Notes:

Minor Study Requirements

Minor in Mathematics

MATH 2530; 12 credit hours in Mathematics and Statistics courses numbered above 300. At least 6 of the 12 credit hours must be in courses labeled MATH. The Credit/No Credit grade option may not be used for minor study and the grades in all mathematics and statistics courses must be "C" (not "C-") or better. Courses required for a major may not be used to fulfill a minor requirement.

Minor in Statistics: Requirements for the Mathematics Major

MATH 1350 and 2530; STAT **345, 427, 428; an additional 3 credit hours of Statistics in courses numbered 300 and above. All 12 credit hours in courses 300-level and above must be in courses labeled STAT. The Credit/No Credit grade option may not be used for minor study and the grades in all statistics courses must be a "C" (not "C-") or better.

MATHEMATICS BS DEGREE REQUIREMENTS 2022/2023
OPTION III - MATHEMATICS EDUCATION

Student name: _____ UNM ID: _____

Concentration: **Mathematics Education** Minor (req): _____

Admitted to program on: _____ as a (circle one of) FR / SO / JR / SR

Expected date of graduation: _____

Student's interests: _____

Completed Courses	Sem	Grade	Instructor	Pre-approved substitutions
Math 1512 (162) Calc 1				
Math 1522 (163) Calc 2				
Math 2531 (264) Calc 3				
MATH 327 Intro Math thinking and Disc Structures				
MATH 305 Math Hist Persp				
MATH 321 or MATH 314 Linear Algebra				
MATH 322 Modern Algebra I				
MATH 306 College Geom				
STAT **345 Elements of Mathematical Statistics and Probability Theory				
One from MATH 316 or 375 or 412 #1				
MATH 401 Advanced Calculus I				
MATH 338 Math Second Teach				
Computing course at the level of ENG130L, CS 152L, PHYS 2415, or ECE 131L #1				

Math Education: MATH 305, 306, **316 or **375 or **412, **314 or **321, 322, **327, 338, 401; STAT **345.

Reference: <http://catalog.unm.edu/catalogs/2022-2023/colleges/arts-sciences/mathematics-statistics/undergraduate-program.html>

Notes: Fall only: Math 305, 441, 462; Spring only: Math 306, 322, 412.

Notes:

Minor Study Requirements

Minor in Mathematics

MATH 2530; 12 credit hours in Mathematics and Statistics courses numbered above 300. At least 6 of the 12 credit hours must be in courses labeled MATH. The Credit/No Credit grade option may not be used for minor study and the grades in all mathematics and statistics courses must be "C" (not "C-") or better. Courses required for a major may not be used to fulfill a minor requirement.

Minor in Statistics: Requirements for the Mathematics Major

MATH 1350 and 2530; STAT **345, 427, 428; an additional 3 credit hours of Statistics in courses numbered 300 and above. All 12 credit hours in courses 300-level and above must be in courses labeled STAT. The Credit/No Credit grade option may not be used for minor study and the grades in all statistics courses must be a "C" (not "C-") or better.

MATHEMATICS BS DEGREE REQUIREMENTS 2022/2023
OPTION I - PURE MATHEMATICS

Student name: _____ UNM ID: _____

Concentration: **Pure Mathematics** Minor (req): _____

Admitted to program on: _____ as a (circle one of) FR / SO / JR / SR .

Expected date of graduation: _____

Student's interests: _____

Completed Courses	Sem	Grade	Instructor	Pre-approved substitutions
Math 1512 (162) Calc 1				
Math 1522 (163) Calc 2				
Math 2531 (264) Calc 3				
MATH 327 Intro Math thinking and Disc Structures				
MATH 321 Linear Algebra				
MATH 313 Complex Variable				
MATH 322 Modern Algebra I				
MATH 401 Advanced Calculus I				
Two from 319 , 421 , 431 , 439 , 441 , 462 , 472 #1				
#2				
MATH 402 (Spring) Adv Calc II				
Additional 300-level or above MATH course #1				
Computing course at the level of ENG130L, CS 152L, PHYS 2415, or ECE 131L #1				

Pure Mathematics: MATH **313, 322, **327, 402; two of the following courses: **319, *421, *431, **439, 441, 462, 472. Students must also take one additional 3-4 credit hour 300-level or above MATH course. Students who are unfamiliar with mathematical abstraction are encouraged to take **327 as early in their program as possible. Reference: <http://catalog.unm.edu/catalogs/2022-2023/colleges/arts-sciences/mathematics-statistics/undergraduate-program.html>

Notes: Fall only: Math 322, 431, 441, 462, [464](#), [471](#); Spring only: Math 319, 402, 421, [463](#), 472

Notes:

Minor Study Requirements

Minor in Mathematics

MATH 2530; 12 credit hours in Mathematics and Statistics courses numbered above 300. At least 6 of the 12 credit hours must be in courses labeled MATH. The Credit/No Credit grade option may not be used for minor study and the grades in all mathematics and statistics courses must be "C" (not "C-") or better. Courses required for a major may not be used to fulfill a minor requirement.

Minor in Statistics: Requirements for the Mathematics Major

MATH 1350 and 2530; STAT **345, 427, 428; an additional 3 credit hours of Statistics in courses numbered 300 and above. All 12 credit hours in courses 300-level and above must be in courses labeled STAT. The Credit/No Credit grade option may not be used for minor study and the grades in all statistics courses must be a "C" (not "C-") or better.

STATISTICS BS DEGREE REQUIREMENTS 2022/2023

STATISTICS

Student name: _____ UNM ID: _____

Major: **Statistics** Minor (req): _____

Admitted to program on: _____ as a (circle one of) FR / SO / JR / SR .

Expected date of graduation: _____

Student's interests: _____

Completed Courses	Sem	Grade	Instructor	Pre-approved substitutions
Math 1350 (Stat 145) Intro Stats				
Math 1512 (162) Calc 1				
Math 1522 (163) Calc 2				
Math 2531 (264) Calc 3				
Computing course at the level of ENG130L, CS 152L, PHYS 2415, or ECE 131L #1				
Math 314 or 321 Lin Alg				
Stat 345 Elem Prob				
Stat 427 ADA1				
Stat 428 ADA2				
Stat 440 Reg				
Stat 445 ANOVA				
Six hours 300+ (see <i>Note 1</i>) #1				
#2				
Six hours 250+ (Stat courses)				

Reference: <http://catalog.unm.edu/catalogs/2022-2023/colleges/arts-sciences/mathematics-statistics/undergraduate-program.html>

Notes:

1. Must be advisor approved. Options: Anth, Biol, Chem, CS, Econ, Engr, Math, Mgt, Psy, Stat
2. For students interested in a career in actuarial science, preparation for the first actuarial exam consists of the courses MATH 1512, 1522, 2530/31 and (314 or 321). Preparation for the second actuarial exam consists of the courses STAT 453 and 461.
3. Students planning on pursuing a graduate degree in Statistics are encouraged to take MATH 321 and 401.

Advisement History:

Date	Advised by	Semester	Recommended courses for semester

Registration History: (Math/Stat courses only)

Institution	Semester	Course	Grade	Instructor (if known)

Notes: _____

Minor Study Requirements

Minor in Statistics

One year of calculus: MATH 1350, (1430 and 1440) or (1512 and 1522); STAT **345, 427, 428; an additional 3 credit hours of mathematics or statistics in courses numbered 250 and above.

The Credit/No Credit grade option may not be used for minor study and the grades in all mathematics and statistics courses must be "C" (not "C-") or better.

Minor in Mathematics: Requirements for the Statistics Major

MATH 2530; 12 credit hours of Mathematics courses numbered above 300. All 12 credit hours must be in courses labeled MATH. The Credit/No Credit grade option may not be used for minor study and the grades in all mathematics courses must be "C" (not "C-") or better.