NMT Math Requirements

Brian Borchers (borchers@nmt.edu)
Why Are Math Courses So Critical?

- MATH 131 and 132 (Calculus I and II) are general degree requirements for the Bachelor of Science degree.
- Math courses must be taken in the right order.
- Most majors require from two to six advanced math classes beyond MATH 132.
- Most science and engineering courses at NMT have math prerequisites.
- Students who start in the lower level math courses are much more likely to graduate late or never graduate at all.
The Math Sequence

- MATH 101 College Algebra
- MATH 103 Precalculus
- MATH 104 Trigonometry
- MATH 131 Calculus I (MATH 103 and 104 prereqs)
- MATH 132 Calculus II
- MATH 231 Calculus III
- MATH 254 Linear Algebra
- MATH 335 Intro to Differential Equations
- MATH 337 Engineering Mathematics
- MATH 352 Foundations of Mathematics
- MATH 382 Probability Theory
Math Requirements for Some Majors

- Computer Science: MATH 352, 382.
- Electrical Engineering: MATH 231, 254, 335, 382, Elective.
- Mechanical Engineering: MATH 231, 335, 337.
- Petroleum Engineering: MATH 231, 335.
- Physics: MATH 231, 254, 332, 335, 336, Elective
Key Math Prerequisites

- BIOL 111 (Biology I): Prerequisite MATH 103
- CHEM 121 (Chemistry I): Prerequisite MATH 103
- CSE 113 (Introduction to Programming): Prerequisite MATH 103
- PHYS 121 (Physics I): Corequisite MATH 131
- ES 110 (Intro to Engineering Design): Corequisite MATH 103
- ES 111 (Computer Programming for Engineers): Corequisite MATH 131
- ES 201 (Statics): Corequisite MATH 231
Effects Of Math On Graduation Rates

- Freshmen who began in MATH 131 have a six year graduation rate of 58%.
- Freshmen who began in MATH 103 have a six year graduation rate of 38%.
- Freshmen who began in MATH 101 have a six year graduation rate of less than 4%.
Can’t I Just Take Humanities and Social Science Courses While I’m Working Through The Math Courses?

This doesn’t work well. First, you’ve probably already got credit for a bunch of humanities and social sciences courses. Second, you need to be taking four or five courses per semester, and after a couple of semesters of H&SS courses you’ll have taken all of your H&SS requirements.
What Math Class Do I Start In?

It depends on

- Transfer credit (for courses passed with a letter grade of C or better.)
- ACT Math Score
- AP Credit
- Placement test
Luna Community College

- LCC MATH 180 = NMT MATH 101
- LCC MATH 190 = NMT MATH 104
- LCC MATH 195 = NMT MATH 131
- LCC MATH 212 = NMT MATH 132
- LCC MATH 213 = NMT MATH 231
Northern New Mexico College

- NNMC MATH 150 = NMT MATH 101
- NNMC MATH 155 = NMT MATH 104
- NNMC MATH 162 = NMT MATH 131
- NNMC MATH 163 = NMT MATH 132
- NNMC MATH 264 = NMT MATH 231
Santa Fe Community College

- SFCC MATH 121 = NMT MATH 101
- SFCC MATH 150 = NMT MATH 103
- SFCC MATH 155 = NMT MATH 104
- SFCC MATH 162 = NMT MATH 131
- SFCC MATH 163 = NMT MATH 132
- SFCC MATH 264 = NMT MATH 231
UNM

- UNM MATH 121 = NMT MATH 101
- UNM MATH 150 = NMT MATH 103
- UNM MATH 123 = NMT MATH 104
- UNM MATH 162 = NMT MATH 131
- UNM MATH 163 = NMT MATH 132
- UNM MATH 264 = NMT MATH 231
When Should I Transfer?

- If you want to graduate within four years of starting at NMT, then you should come with transfer credit for courses at least through MATH 104.
- If you want to graduate within three years of starting at NMT, then you should come with transfer credit for courses at least through MATH 132.
Options for Catching Up

● Summer school at NMT is a great option for students who need to gain a semester in mathematics. MATH 101, 103, 104, 131, and 132 are offered every summer.

● There is a placement test that students can use to test out of MATH 101, 103, or 104 and potentially place into courses up to MATH 131.
Questions?

- For questions about the math placement test, send email to mathplacement@nmt.edu
- For questions about transfer credit, send questions to registrar@admin.nmt.edu
- For general questions about the math department, send email to math@nmt.edu