OPTIONS FOR SOFTWARE ENGINEERING MAJOR GUIDED ELECTIVES
(2022-2023)

SE students following the 2022.2023 catalog must complete 1 math guided elective.

Guided Elective Option	Pre-Requisite Course
MATH 2415 Calculus of Several Variables	A grade of C- or better in MATH 2414
MATH 2420 Differential Equations with Applications	A grade of at least a C- in either MATH 2415 or in MATH 2419 or equivalent and a grade of at least a C- in MATH 2418 or equivalent.
MATH 2451 Multivariable Calculus with Applications	A grade of at least a C- in either MATH 2415 or in MATH 2419 or equivalent and a grade of at least a C- in MATH 2418 or equivalent
MATH 3310 Theoretical Concepts of Calculus	A grade of at least a C- in either MATH 2415 or in MATH 2419 or equivalent.
MATH 3311 Abstract Algebra I	A grade of at least a C- in either MATH 2415 or in MATH 2419 or equivalent and a grade of at least C- in MATH 2418 or equivalent.
MATH 3321 Geometry	A grade of at least a C- in either MATH 2306 or MATH 2415 or MATH 2419 or equivalent.
MATH 3323 Elementary Number Theory	A grade of at least a C- in either MATH 2414 or in MATH 2418 or MATH 2419
MATH 3351 Advanced Calculus	(A grade of at least a C- in either MATH 2415 or MATH 2419 or equivalent) and a grade of at least a C- in MATH 2418 or equivalent.
MATH 3397 Mathematical Problem Solving	MATH 2413 or MATH 2417 or MATH 3321.
MATH 4332 Scientific Math Computing	A grade of at least a C- in either MATH 2415 or in MATH 2419 or equivalent and a grade of at least C- in MATH 2418 or equivalent.
MATH 4334 Numerical Analysis	(MATH 2370 or CS 1324 or CS 1325 or CE 1337 or CS 1337) and (MATH 2418 and (MATH 2451 or MATH 3351). (Same as CS 4334)
MATH 4381 Structure of Modern Geometry	(MATH 2370 or CS 1324 or CS 1325 or CE 1337 or CS 1337) and (MATH 2418 and (MATH 2451 or MATH 3351). (Same as CS 4334)
STAT 3355 Introduction to Data Analysis	MATH 2415 or MATH 2419 or equivalent.