

Mathematics Requirements

A minimum of six credit hours of Mathematics is required for both the M.S. and Ph.D. Plans of Study.

The following courses are approved:

MATH 4013, Engineering Mathematics; Calculus of Several Variables (prerequisites: MATH 2163, 3013)
MATH 4023, Introduction to Modern Analysis (prerequisites: MATH 2163, 3613)
MATH 4153, Advanced Calculus II (prerequisite: MATH 4143)
MATH 4233, Engineering Mathematics; Intermediate Differential Equations (prerequisites: MATH 2233, 3013)
MATH 4263, Introduction to Partial Differential Equations (prerequisites: MATH 2163, 2233, 3013)
MATH 4283, Complex Variables (prerequisite: MATH 4013)
MATH 4553, Linear & Non-Linear Programming (prerequisites: MATH 2163, 3013)
Any MATH 5000- or 6000-level course

MAE 5053, Design of Engineering Experiments (prerequisite: graduate standing) and/or MAE 5093, Numerical Engineering Analysis (prerequisites: undergraduate course in computer programming and consent of instructor) may also be used to satisfy your mathematics requirements (6 credit hours) in the MAE graduate program, upon approval of your permanent advisor. If MAE 5053 and/or MAE 5093 are used to satisfy or partially satisfy your mathematics requirement(s), neither can be simultaneously used to count towards your MAE 5000-level course requirements.

You may partially satisfy the mathematics requirement by the following courses in computer science, statistics, or physics, if approved beforehand by your advisor and the MAE Graduate Director.

Courses that may be approved to partially satisfy the mathematics requirement are:

CS 5513, Numerical Analysis I (prerequisite: CS 4513)
STAT 5053, Time Series Analysis (prerequisite: STAT 4043)
STAT 5063, Multivariate Methods (prerequisites: STAT 4023, 4043, 5023)
STAT 5133, Stochastic Processes (prerequisites: MATH 2233, 3013, STAT 5123)
(Same course as MATH 5133 and IEM 5133)
Any STAT 6000-level course
PHYS 5453, Methods of Theoretical Physics (prerequisite: PHYS 3513)

Only those courses listed for Graduate credit in the OSU University Catalog (having an asterisk) and acceptable to the student's advisor can be used on the Study Plan. DO NOT take non-MAE or MATH courses without *prior* approval of your advisor and the MAE Graduate Director.

Your mathematics requirement may be waived by the MAE Graduate Director, if you have received prior credit for taking advanced mathematics courses as Undergraduate electives.