Sonoma State University   Updated   12.12.22 rc
Department of Mathematics
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Name _____

PROGRESS TOWARD COMPLETION OF MAJOR
B.S. with concentration in Applied Mathematics

This B.S. concentration prepares students for employment in industry and graduate schools in scientific fields. Prerequisites and semesters offered follow the course. S=Spring; F=Fall; every semester if not listed.

Required Courses

Core: **Met   Do**

Math 161 – Differential and Integral Calculus I (GE B4)..................................4 ____ ____

Math 180 – Computing for Math/Science (161; F) ....2 ____ ____

Math 211 – Differential and Integral Calculus II (161) ....4 ____ ____

Math 220 – Reasoning and Proof
           (161 and (one subsequent math class or CS 242))   ……..............4 ____ ____

Math 241 – Linear Algebra with Applications in Differential Equations (211).. ...4 ____ ____

Math 340 – Real Analysis I (220 and (241 or 261); F)......................................4 ____ ____

Concentration:

Math 261 – Multivariable Calculus (211) ....4 ____ ____

One of the Following*:

      *Math 316 – Graph Theory and Combinatorics (Math 220 or CS 242
            or 6 units of courses numbered 200 or above) **or**

      *Math 416 – Graph Theory and Combinatorics (Math 142 or
            200 or 220) **or**

      *Math 445 – Mathematical Statistics and Operations Research
            (345; S) ....4 ____ ____

Math 322 – Linear Algebra ((220 and 241); S) ....4 ____ ____

Math 345 – Probability Theory (261; F) *courses may be taken concurrently ....4 ____ ____

Math 352 – Numerical Analysis (241 and (180 or CS 115); F)...........................4 ____ ____

Math 431 – Applied Partial Differential Equations (241; S) ....4 ____ ____

Math 470 – Mathematical and Statistical Modeling (211; F, UD Area B, GE).....4 ____ ____

Supporting Courses:

Phys 114 – Intro to Physics (GE B1; 161) ....4 ____ ____

Total units in applied mathematics program 54
...(incl. 12 in GE)

NOTE: Even though it is possible to complete this major with only 28 upper division units, **ALL** students are required to complete a **minimum of 40 upper division units,** including GE, the major, and electives, for graduation.