



**The University of Tennessee
Department of Mathematics Announces
a Master's Degree Concentration in
Applied Mathematics**



To prepare students interested in pursuing careers in applied mathematics in business, industry or government, the UT Department of Mathematics has developed a concentration in applied mathematics at the master's degree level. This concentration is available under both the thesis and non-thesis options and provides most students the opportunity to explore more deeply areas of special interest.

The following prerequisites must be satisfied in our program or in course work passed elsewhere and judged equivalent by the department.

PREREQUISITES

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| 1. Numerical Analysis 471, Numerical Algebra 472 or Numerical Algorithms 371
2. Methods in Applied Mathematics 512 or both Differential Eqns. II 431 and Partial Differential Eqs. 435 | 3. Advanced Calculus 447-448 (honors) or 445-446
4. Matrix Algebra II 453 |
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Of the 30 hours required for a master's degree, up to 9 hours of 400-level courses taken for graduate credit. Thus 3 of these prerequisite courses may count toward a master's degree.

BREADTH REQUIREMENTS

At least one course from each of the following five areas

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| 1. <i>Foundations in Applied Mathematics</i>
Methods in Applied Mathematics 511 (with 510)
Analytical Applied Mathematics I 515
Analytical Applied Mathematics II 516

2. <i>Optimization</i>
Linear & Nonlinear Programming 576
Optimization 577
Optimal Control Theory 585

3. <i>Numerical Mathematics</i>
Numerical Methods for Partial
Differential Equations 578
Numerical Mathematics I 571
Numerical Mathematics II 572 | 4. <i>Modeling</i>
Stochastic Modeling 527
Mathematical Principles of
Continuum Mechanics 537
Industrial Mathematics 475
Mathematical Ecology 581

5. <i>Statistics</i>
Statistics 525
Statistical Methods (Statistics Dept.) 571
Biometry 560
(in Ecology and Evolutionary Biology Dept.) |
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To provide experience in presenting mathematics to others, it is necessary to pass a "one-hour" seminar in Applied Mathematics 519 or in Mathematical Ecology 589 in which student presentations are required.

Each student who completes the requirements for this concentration and is awarded a master's degree in mathematics from UT will be awarded a certificate from the Mathematics Department indicating the successful completion of this concentration.

For more information or applications forms, contact Director of Graduate Studies; Department of Mathematics; University of Tennessee; Knoxville, TN 37996-1300; Math Graduate Office: (865) 974-2464; e-mail: gradprogram@math.utk.edu.