

**Department of Mathematics and Statistics: Doctoral Plan Of Study**

Student: \_\_\_\_\_ Program: Ph.D. in Computational Mathematics

ID #: \_\_\_\_\_ Advisor: \_\_\_\_\_

COURSEWORK (MINIMUM 48 CREDIT HOURS)

SEMESTER & YEAR

Choose at least 48 credit hours of approved coursework.

- STA 622 Complex Data Analysis (3) \_\_\_\_\_
- STA 635 Theory of Linear Regression (3) \_\_\_\_\_
- STA 642 Statistical Computing (3) \_\_\_\_\_
- STA 651 Mathematical Statistics (3) \_\_\_\_\_
- STA 652 Mathematical Statistics (3) \_\_\_\_\_
- STA 661 Advanced Statistics in the Behavioral and Biological Sciences I (3) \_\_\_\_\_
- STA 662 Advanced Statistics in the Behavioral and Biological Sciences II (3) \_\_\_\_\_
- STA 665 Analysis of Survival Data (3) \_\_\_\_\_
- STA 670 Categorical Data Analysis (3) \_\_\_\_\_
- STA 671 Multivariate Analysis (3) \_\_\_\_\_
- STA 673 Statistical Linear Models I (3) \_\_\_\_\_
- STA 674 Statistical Linear Models II (3) \_\_\_\_\_
- STA 675 Advanced Experimental Design (3) \_\_\_\_\_
- STA 676 Sample Survey Methods (3) \_\_\_\_\_
- STA 682 Theory of Time Series (3) \_\_\_\_\_
- STA 703 Topics in High Dimensional Data Analysis (3) \_\_\_\_\_
- MAT 701 Graduate Seminar in Computational Mathematics  
(\_\_\_\_ credit hours) \_\_\_\_\_
- STA 701 Seminar in Computational Statistics  
(\_\_\_\_ credit hours) \_\_\_\_\_
- MAT 709 Topics in Computational Mathematics  
(\_\_\_\_ credit hours) \_\_\_\_\_
- STA 709 Topics in Computational Statistics  
(\_\_\_\_ credit hours) \_\_\_\_\_
- MAT 721 Mathematical Cryptography (3) \_\_\_\_\_
- MAT 723 Numerical Mathematics (3) \_\_\_\_\_
- MAT 726 Finite Element Methods (3) \_\_\_\_\_

- MAT 727 Linear Algebra (3) \_\_\_\_\_
- MAT 728 Numerical Linear Algebra (3) \_\_\_\_\_
- MAT 735 Ordinary Differential Equations (3) \_\_\_\_\_
- MAT 736 Partial Differential Equations (3) \_\_\_\_\_
- MAT 737 General Topology (3) \_\_\_\_\_
- MAT 740 Algebra I: Groups and Rings (3) \_\_\_\_\_
- MAT 741 Algebra II: Modules and Fields (3) \_\_\_\_\_
- MAT 742 Computational Algebraic Number Theory (3) \_\_\_\_\_
- MAT 743 Complex Analysis (3) \_\_\_\_\_
- MAT 745 Measure Theory (3) \_\_\_\_\_
- MAT 746 Real Analysis (3) \_\_\_\_\_
- MAT 747 Computational Topology (3) \_\_\_\_\_
- MAT 748 Computational Algebra (3) \_\_\_\_\_
- MAT 749 The Mathematics of Machine Learning (3) \_\_\_\_\_
- MAT 751 Advanced Topological Data Analysis (3) \_\_\_\_\_
- MAT 790 Directed Doctoral Research  
(\_\_\_\_ credit hours) \_\_\_\_\_
- MAT 799 Dissertation  
(\_\_\_\_ credit hours) \_\_\_\_\_
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Choose additional electives that do not count toward the required 48 hours.

- MAT 695 Mathematical Analysis (3) \_\_\_\_\_
- MAT 696 Mathematical Analysis (3) \_\_\_\_\_
- MAT 601 Seminar in the Teaching of Mathematics I (1) \_\_\_\_\_
- MAT 602 Seminar in Mathematical Software (3) \_\_\_\_\_
- MAT 603 Practicum in the Teaching of Mathematics (2) \_\_\_\_\_

PRELIMINARY EXAMINATION

MONTH & YEAR

**Written component** Chose two areas.

- Mathematical Analysis \_\_\_\_\_
- Linear Algebra and Matrix Theory \_\_\_\_\_
- Linear Models \_\_\_\_\_
- Mathematical Statistics \_\_\_\_\_

**Oral component**

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DISSERTATION RESEARCH

Include 18-21 credit hours of MAT 799 Dissertation in required 48 hours.

Dissertation committee: \_\_\_\_\_(Chair)

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Oral topic proposal and defense \_\_\_\_\_

Written dissertation research outline \_\_\_\_\_

Oral dissertation presentation and defense \_\_\_\_\_

SIGNATURES

Sign and print below.

Student: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_

DGS: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_