

# CSU Channel Islands

## MS Mathematics Curriculum

**Dated 04/19/17**

### **Prerequisites for the program:**

The majority of the students admitted into the MS program have a bachelor's degree in mathematics or a closely related discipline. It is recommended that you have completed at least one semester in each of the following topics: real analysis, probability and statistics, and abstract algebra. Students lacking recommended prerequisites may be admitted conditionally and advised to take undergraduate courses necessary to prepare fully for the program.

### **Requirements for the Master of Science in Mathematics - 32 units**

#### **Core Courses - 11 units**

MATH 511 Functional Analysis (3)

MATH 512 Probabilistic Methods and Measure Theory (3)

MATH 513 Advanced Algebra (3)

*And required two units of:*

MATH 599 Graduate Seminar (1)

#### **Electives - 15 units\***

*Choose **at least two** electives from the following list:*

MATH 570 Combinatorics (3)

MATH 582 Number Theory and Cryptography (3)

MATH 584 Algebraic Geometry and Coding Theory (3)

MATH 587 Markov Chains and Markov Processes (3)

MATH 588 Stochastic Analysis (3)

MATH 590 Graduate Topics in Mathematics

*Choose **at most three** electives from the following list:*

MATH 555 Actuarial Sciences (3)

MATH 565 Research in Mathematics Education (3)

PHYS 510 Advanced Image Analysis Techniques (3)  
PHYS 546 Pattern Recognition (3)  
COMP 554 Algorithms (3)  
COMP 569 Artificial Intelligence (3)  
COMP 571 Biologically Inspired Computing (3)  
COMP 572 Neural Networks (3)  
COMP 575 Multi-Agent Systems (3)  
COMP 578 Data Mining (3)

*\*MATH 594 (Independent Study) and other graduate courses from mathematics or the mathematical sciences may be included with the graduate advisor's approval.*

### **Projects or Masters Thesis Concentration- 6 units**

MATH 597 Master Thesis (1-6)  
*or*  
MATH 598 Master Project (1-6)

See [Thesis](#) for additional information.

### **Graduate Writing Assessment Requirement**

Writing proficiency prior to the awarding of the degree is demonstrated by successful completion of at least **two** credits of MATH 597 (Master's Thesis) or MATH 598 (Masters Project) with a grade of B or higher