**FULBRIGHT COLLEGE OF ARTS AND SCIENCES**

**MAJOR REQUIREMENTS for a BACHELOR OF SCIENCE IN MATHEMATICS**

*Minimum degree credit hours required to graduate = 120 (Core + Major + General Electives)*

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**NATURAL SCIENCES (2 courses – 8 hours)**
Choose from one of the following natural science sequences:
- BIOL 1543/1541L Principles of Biology
- BIOL 1603/1601L Principles of Zoology
- BIOL 1613/1611L Plant Biology
- BIOL 2013/2011L General Microbiology
- CHEM 1103/1101L University Chemistry I
- CHEM 1123/1121L University Chemistry II
- GEOS 1113/1111L Physical Geology
- GEOS 1133/1131L Earth Science
- PHYS 2054 University Physics I
- PHYS 2074 University Physics II

**MATHEMATICS CORE (8 courses – 24 hours)**
- MATH 2574 Calculus III
- MATH 2584 Elementary Differential Equations
- MATH 2803 Transition to Advanced Math
- MATH 3093 Abstract Linear Algebra
- MATH 3113 Intro to Abstract Algebra
- MATH 4513 Advanced Calculus I
- MATH 4933 Mathematics Major Seminar

*Note: It is recommended that MATH 2803 be taken as early as possible in the program.*

*Note: A 2.00 cumulative GPA on all work completed in the Department of Mathematical Sciences is required for graduation with a B.A. or B.S. degree.*

**COMPUTER PROGRAMMING (1 course – 4 hours)**
- CSCE 2004 Programming Foundations I

**ADDITIONAL REQUIREMENTS (choose one below)**
- Completion of eight hours numbered 3000+ not in MATH/STAT with department approval.
- Completion of UA Teach curriculum.
- Completion of Fulbright Four Year Honors Core for a Bachelor of Science.

**MATHEMATICS WRITING REQUIREMENT**
- Satisfied by a senior writing project under the direction of a faculty member (typically in MATH 4933) or by completing an honors thesis.

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**CONCENTRATION 1: APPLIED (6 courses – 18-19 hours)**
A program for the student who wishes to prepare for either applied work in mathematics or graduate work in some field other than mathematics or statistics.
- STAT 3013 Intro to Probability and Statistics
- MATH 4353 Numerical Linear Algebra
- MATH 4363 Numerical Analysis
- MATH 4423 Intro to Partial Differential Equations
- OR
- MATH 3583 Foundations Applied Math

Two additional MATH or STAT electives numbered 3000 or higher. (Students may also take CSCE 4133)

**CONCENTRATION 2: PURE (6 courses – 18 hours)**
A program for the student who is seeking a broad background in mathematics or wishes to study mathematics at the graduate level.
- MATH 4443 Complex Variables
- Select 3 of the following
  - MATH 3203 Number Theory
  - MATH 4113 Intro to Abstract Algebra II
  - MATH 4503 Differential Geometry
  - MATH 4523 Advanced Calculus II

Two MATH or STAT electives numbered 3000 or higher. (Students may also take CSCE 4133 Algorithms)

**CONCENTRATION 3: STATISTICS (7 courses – 19 hours)**
A program for the student who wishes to emphasize statistics or who intends to study statistics at the graduate level.
- STAT 3013 Intro to Probability & Statistics
- STAT 3003 Statistical Methods
- OR
- STAT 4101L Intro to R
- STAT 3113 Introduction to Mathematical Statistics
- STAT 4033 Nonparametric Statistical Methods

Two MATH or STAT electives numbered 3000 or higher. (Students may also take CSCE 4133 Algorithms)