Mathematics(FSU-teach)
a Mathematics Major for the FSU teaching program

Math Curriculum Committee

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Introduction

Mathematics has four other undergraduate major codes. Three of these, applied mathematics, biomedical mathematics and pure mathematics, are in the mathematics program. The mathematics FSU-teach option, and is the fourth option in the mathematics program. This options addresses the needs of prospective high school mathematics teachers. Two of the other major options are basically geared for preparing the students for graduate school in pure or applied mathematics. The third option is geared for pre-medical undergraduates with its vast collection of science courses. The FSU-Teach plan for mathematics is a more general cross section of mathematics courses that also hits a few notes, like geometry. Their pedagogical training is in a separate secondary major, which is expected to use an additional 32 hours. The new option will have the same Common Prerequisites as the other Mathematical program options and have the same academic map benchmarks as the pure or the applied mathematics options. All the mathematics faculty will participate it teaching these courses.

Mathematics Courses

The new teaching option will include a (20 hour) mathematics core of the three calculus courses (MAC 2311-2-3), ordinary differential equations (MAP 2302) and linear algebra (MAS 3105). It will include the standard collateral (3 hour) statistics course that all math majors take (STA 4321). The collateral (5 hours) in Physics (PHY 2048c) is required. It will also include a collateral required (3 hour) computing course (COP 3014).

Beyond the core, this option requires courses in four mathematical areas of Analysis, Algebra, Geometry and Modeling. Courses acceptable for each are listed below. Also two elective mathematics courses are required (one of the electives must be at the 3000 level or above).

- Algebra (3 hours) MAS 3301, MAS 4302 or MAS 4203
- Analysis (3 hours) MAA 4402, MAA 4224 or MAA 4226
- Geometry (3 hours) MTG 4212
- Modeling (3 hours) MAP 4103, MAP 4175, MAP 4180 or MAP 4481
- Electives (6 hours) MAA4227, MAD 2104, MAD 3105, MAP 4153 MAP 4170, MAP4202, MAP 4216, MAP 4341, MAS 4106, MAS 4303, MGF 3301, MHF 4302, MTG 4302 or additional courses from the Algebra/Analysis/Geometry/Modeling groups.

Course work for FSU-teach

For math this will include 32 hours of course work. It will count as a major and so no addition minor is required. These courses are (mostly, but not entirely) outside Mathematics. The current list of courses is SMT 1043, SMT 1053, MAT 3930, BSC 4933, SMT3100, SMT 3301, ISC 3523C, HIS 3505, SMT 4664, RED 4335, TSL 4324, and SMT 4985. Some may count for part of the liberal arts requirements.

Course List

38	Mathematics (38)	Core (20) + List (18)
41	Statistics (3)	STA 4321
44	Comp Prog (3)	COP 3014
49	Physics (5)	PHY 2048C
81	Education (32)	FSU-teach package for Math
93	For Lang (12)	Arts & Sciences Intermediate Level Course
119	Other Liberal Arts (26?)	(Math and Science already covered)
119	Total (119)	Less if HIS 3505 counts as liberal arts

Course Number to Course Title

BSC 4933	Classroom Interactions
HIS 3505	Perspectives on Sci and Math
MAA 4224	Intro to Analysis
MAA 4227	Advanced Calculus II
MAC 2311	Calculus I
MAC 2313	Calculus III
MAD 3105	Discrete Math II
MAP 2302	ODE
MAP 4103	Math Modeling
MAP 4170	Intro to Actuarial Math
MAP 4202	Optimization
MAP 4341	Elem PDE I
MAS 3105	Linear Alg I
MAS 4106	Linear Alg II
MAS 4302	Abstract Algebra I
MAT 3505	Functions and Models
MHF 4302	Math Logic
MTG 4302	Elementary Topology
SMT 1043	Step 1: Inquiry Approaches to Teaching
SMT 3100	Knowing and Learning
SMT 4664	Project Based Instruction
STA 4321	Intro Math Stat
COP 3014	C++ for CS majors
ISC 3523	Research Methods
MAA 4226	Advanced Calculus I
MAA 4402	Complex Variables
MAC 2312	Calculus II
MAD 2104	Discrete Math I
MAD 3703	Numerical Analysis I
MAP 2480	BioCalculus Lab
MAP 4153	Vector Calculus
MAP 4180	Game Theory
MAP 4216	Calculus of Variations
MAP 4481	Math Model for Bio Math
MAS 3301	Intro Modern Algebra
MAS 4203	Number Theory
MAS 4303	Abstract Algebra II
MGF 3301	Intro to Adv Math
MTG 4212	College Geometry
PHY 2048C	Physics
RED 4335	Content Area Reading, Sci and Math
SMT 1053	Step 2: Inquiry-Based Lesson Design
SMT 3301	Classroom Interactions
SMT 4945	Apprentice Teaching
TSL 4324	Teaching for Equity in Diverse Classrooms