How Mathematics Requirements for Teaching Fulfill Math Major

Mathematics course requirements for future secondary teachers fit within the mathematics major. The required courses for teaching mathematics are: Math 120, 126/8, 220, 232, 244, 252, 262, 356 and one of Stat 212, 272, 322. Here they are in the context of the IMaP – the contract for a math major.

Basic (all required unless completed before coming to St. Olaf)

Req	**120**	**Calculus I**		
Req	**126/8**	**Calculus II**		
Req	**220**	**Linear Algebra**		

Transition courses (at least two required)

		Course	Perspectives	
	242	Modern Computational Mathematics	M	
Req	**244**	**Elementary Real Analysis**	**C***	
Req	**252**	**Abstract Algebra I**	**A***	

Other Level II courses

		Course	Perspectives	Notes
Req	**S 212**	**Statistics for Science**	**M**	**Or Stat 272**
	224	Investigative Mathematics	D	
	226	Multivariable Calculus	C	
	230	Introduction to Differential Equations	C, M	
Req	**232**	**Discrete Mathematics**	**D***	Or Math 364
	234/235	Structure of Higher Mathematics	A	
	236	Mathematics of Biology	M	
	238/239	Number Theory	D	
	248	Knot Theory	D	
Req	**262**	**Probability Theory**	**C, D, M***	
	266	Operations Research	M	
Alt	**S 272**	**Statistical Modeling**	**M**	Or Stat 212
	CS 231	Mathematical Foundations of Computing	A	

Level III courses (at least two required, at least one of which must be a mathematics course)

		Course	Sequence with	Notes
	330	Differential Equations	230	
	340	Complex Analysis	226	
	344	Real Analysis	244	
	348	Topology	244	
	352	Abstract Algebra II	252	
Req	**356**	**Geometry**	**220**	
Alt	*364*	*Combinatorics*	*232*	*Sub for Math 232*
	370	Mathematical Logic	252	
	382	Topics in Math	Varies	
	384	Topics in Applied Math	Varies	
	390	Mathematics Practicum		
	396	Directed Undergraduate Research	Varies	
Alt	*S 322*	*Statistical Theory (prereq S212 or S272)*	*262*	*Sub for S212/272*
	CS 300	Topic: Computer Graphics	220	
	CS 315	Bioinformatics		
	CS 333	Theory of Computation		

Note that the **required** mathematics courses for teaching fill all but one of the 10-course requirements for the major, including the 220/356 sequence and perspectives A, C, D, M. Just add one Level III course or, if well-prepared, replace M232 or S212/272 with their Level III alternatives and add one more Level II or Level III course.
Questions: Contact Martha Wallace in RHM 508 or mail wallace@stolaf.edu