

Salem State University
Mathematics Department Assessment Committee

Curriculum Map for Mathematics Major

The charts below show specifically which goals for the mathematics majors are addressed in which required and elective courses. In general the 200-level courses are introductory in nature and the higher-numbered courses require more depth of understanding and sophisticated application of mathematical techniques. The goals are introduced in the lower-numbered courses and reinforced as the student progresses through the program.

Required Mathematics Courses

Goal	1	2	3	4	5	6	7	8	9
MAT 218 Intro to Math Computing					x	x			x
MAT 220 Calculus I	x	x			x	x		x	x
MAT 221 Calculus II	x	x			x	x		x	x
MAT 234 Intro to Math Proof			x	x	x				x
MAT 303A Abstract Algebra I	x	x	x	x	x		x		x
MAT 304A Linear Algebra I	x	x			x			x	
MAT 320 Calculus III	x	x			x	x		x	
MAT 411 Real Analysis	x	x	x		x				
MAT 490 Senior Seminar	x	x	x	x	x		x	x	

Elective Mathematics Courses

Goal	1	2	3	4	5	6	7	8	9
MAT 314 Discrete Mathematics	x	x			x	x	x	x	
MAT 316 Combinatorics	x	x	x		x		x	x	
MAT 404 Abstract Algebra II	x	x	x	x	x				
MAT 406 Modern Geometry	x	x	x	x	x				x
MAT 407 Prob & Stats I	x	x			x				x
MAT 409 Complex Variables	x	x	x		x				
MAT 415 Geometric Structures	x	x	x		x		x		
MAT 417 Prob & Stats II	x	x			x				x

Mathematics Department Goals

1. Use mathematics to solve problems requiring creativity and insight, as well as those using algorithms.
2. Assess the reasonableness of their solutions.
3. Construct sound mathematical proofs.
4. Use assessments to revise their work or adopt new approaches as necessary.
5. Communicate mathematics clearly, both verbally and in writing.
6. Use technology appropriately in solving problems.
7. Demonstrate an understanding of the connections among the different branches of mathematics.
8. Demonstrate an understanding of applications of mathematics to other disciplines.
9. (For students intending to teach) Be equipped with the mathematical content they need to be effective teachers.