

Graduate Courses by Breadth Category

(last updated August 12, 2010)

For purposes of satisfy the breadth requirement for the Ph.D. degree in Applied Mathematics, courses are categorized according to the following list. Courses not appearing on this list may count toward the breadth requirement only if approved by the student's advisory committee and the graduate committee

Course Number	Old Number	Title	Breadth Category
5000		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5002		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5004		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5005		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5006		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5007		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5008		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5009		RM-MSMSP	NO CREDIT FOR ANY Math DEGREE
5010		History of Math	General
5017		Topics in Applied Mathematics	NO CREDIT FOR ANY Math DEGREE
5027	7827	Topics in Applied Mathematics	Depends on topic
5070		Applied Analysis	Not a depth course
5110		Number Theory	Discrete Math
5135		Functions of a Complex Variable	General
5198		Mathematics for Bioscientists	NO CREDIT FOR ANY Math DEGREE
5250		Problem Solving Tools	General
5310		Probability	Operations Research
5320		Statistics	Statistics
5351		Actuarial Models	General
5387		Regression Analysis, Modeling and Time Series	Statistics
5390		Game Theory	Operations Research
5394		Experimental Designs	Statistics
5410		Modern Cryptology	Discrete Math
5432		Computational Graph Theory	Discrete Math
5446		Theory of Automata	General
5490		Network Flows	Operations Research
5576		Mathematical Foundations of Artificial intelligence I	General
5593		Linear Programming	Operations Research
5610		Computational Biology	General
5660		Numerical Analysis I	Computational Math
5661		Numerical Analysis II	Computational Math
5674		parallel Computing and Architectures	General
5718		Applied Linear Algebra	Not a depth course
5733		Partial Differential Equations	General
5791		Continuous Modeling	Computational Math
5792		Probabilistic Modeling	Operations Research
5793		Discrete Math Modeling	Discrete Math
5794		Optimization Modeling	Operations Research
5830		Applied Statistics	Statistics
6131		Real Analysis	General
6330	5330	Workshop in Statistical Consulting	Statistics

Course Number	Old Number	Title	Breadth Category		
6360	5060	Exploratory Data Analysis	Statistics		
6376		Statistical Computing	Statistics		
6380	5780	Stochastic Processes	Operations Research		
6384		Analysis of dependent Data	Statistics		
6388		Advanced Statistical Methods for Research	Statistics		
6393	5396	Bayesian Statistics	Statistics		
6395		Multivariate Methods	Statistics		
6398		Calculus of Variations and Optimal Control	Operations Research		
6404	5405	Applied Graph Theory	Discrete Math		
6595	5595	NonLinear Programming	Operations Research		
6653	5663	Finite Element Methods	Computational Math		
6735		Continuum Mechanics	Computational Math		
7101	5201	Topology	General		
7132		Functional Analysis	General		
7376		Statistical Computing	Statistics		
7381	6381	Mathematical Statistics I	Statistics		
7382	6382	Mathematical Statistics II	Statistics		
7384	6383	Mathematical Probability	Operations Research		
7385	6385	Stochastic differential Equations	Operations Research		
7397		Nonparametric Statistics	Statistics		
7405		Advanced Graph Theory	Discrete Math		
7409	6409	Applied Combinatorics	Discrete Math		
7410	6406	Combinatorial Structures	Discrete Math		
7413	5113	Modern Algebra I	Discrete Math		
7414	6114	Modern Algebra II	Discrete Math		
7419		Mathematical Coding Theory	Discrete Math		
7421	6221	Projective Geometry	Discrete Math		
7593		Advanced Linear Programming	Operations Research		
7594		Integer Programming	Operations Research		
7595		Advanced NonLinear Programming	Operations Research		
7663	6663	Finite Difference Methods for PDE	Computational Math		
7665	6665	Numerical Linear Algebra	Computational Math		
7667	6667	Approximation Theory	Computational Math		
7821	6222	Topics in Projective Geometry	Discrete Math		
7822	6118	Topics in Linear Algebra	General		
7823	7023	Topics in Discrete Math	Discrete Math		
7824	6024	Topics in Computational Math	Computational Math		
7825	7025	Topics in Optimization	Operations Research		
7826		Topics in Probability and Statistics.	Statistics		
8660	7760	Mathematical Foundations of Finite Element Methods	Computational Math		
8664	7664	Iterative Methods in Numerical Linear Algebra	Computational Math		