

SCHEDULE of COURSE OFFERINGS, POST-CALCULUS, UPPER LEVEL, and MATH HONORS

Like all academic departments, Mathematics determines its course schedule for each individual semester based on predicted need, funding, faculty availability, and classroom considerations. Therefore the timing and frequency for some courses are not rigidly fixed. The table below includes some of the most commonly taken courses and the standard semesters in which they are usually offered. PC indicates post-calculus, U indicates upper level.

Course Number & Title		Fall	Spring	Summer
MATH:0100 (22M:001) Basic Algebra I *		✓	✓	✓
MATH:0300 (22M:003) Basic Geometry *		✓	✓	✓
MATH:1000 (22M:014) First Year Seminar		✓	✓	
MATH:1005 (22M:008) College Algebra		✓	✓	✓
MATH:1010 (22M:005) Trigonometry		✓	✓	
MATH:1020 (22M:009) Elementary Functions *		✓	✓	✓
MATH:1120 (22M:006) Logic of Arithmetic		✓	✓	
MATH:1130 (22M:012) Theory of Arithmetic		✓		
MATH:1140 (22M:081) Geometry for Elementary Teachers		✓	✓	✓
MATH:1240 (22M:010) Finite Mathematics			✓	
MATH:1340 (22M:013) Mathematics for Business		✓	✓	✓
MATH:1380 (22M:017) Calc. & Matrix Algebra for Business		✓	✓	✓
MATH:1440 (22M:015) Math for the Biological Sciences		✓	✓	✓
MATH:1460 (22M:016) Calculus for the Biol. Sciences		✓	✓	✓
MATH:1550 (22M:031) Engineering Math I: Single-Var. Calc.		✓	✓	✓
MATH:1560 (22M:032) Eng. Math II: Multi-Variable Calculus		✓	✓	
MATH:1850 (22M:025) Calculus I		✓	✓	✓
MATH:1860 (22M:026) Calculus II		✓	✓	✓
MATH:2150 (22M:070) Foundations of Geometry	PC		✓	
MATH:2550 (22M:033) Eng. Math III: Matrix Algebra	PC	✓	✓	✓
MATH:2560 (22M:034) Eng. Math IV: Differential Equations	PC	✓	✓	✓
MATH:2700 (22M:027) Introduction to Linear Algebra *	PC	✓	✓	✓
MATH:2850 (22M:028) Calculus III	PC	✓	✓	
MATH:2995 (22M:095) Introduction to Research Opportunities	PC		✓	
MATH:3550 (22M:037) Eng. Math V: Vector Calculus	PC	✓	✓	
MATH:3600 (22M:100) Intro. to Ordinary Diff. Equations	PC	✓	✓	✓
MATH:3720 (22M:050) Introduction to Abstract Algebra *	PC	✓	✓	✓
MATH:3770 (22M:055) Fund. Props. Spaces & Functions I	PC	✓	✓	
MATH:3800 (22M:072) Elementary Numerical Analysis	PC	✓	✓	✓
MATH:4120 (22M:107) History of Mathematics *	PC	✓	✓	✓

*These courses may also be available as Guided Independent Study (GIS) offerings.

NOTE: MATH: 3700, 3750, 4010, and 4020 require graduate standing, and duplicate some undergraduate courses. Hence, they are not open to undergraduate students. MATH:3995-3997 are not listed, since they have variable topics and some are individual studies with instructors. None of these 7 courses are considered post-calculus or upper level for undergraduates.

Many upper-level courses numbered 3900, 4000-4900 are offered only once per year.
 PC indicates post-calculus, U indicates upper level, and H indicates eligible for Math Honors.
 Check ISIS for the alternate prerequisites using Engineering Math courses in the tables below.

Course Number & Title		Fall	Spring	Prerequisites
MATH 3900 (22M:96) Introduction to Math Research	PC, U		✓	MATH:1860 & 2700
MATH:4040 (22M:127) Matrix Theory	PC, U		✓	MATH:2700
MATH:4050 (22M:150) Introduction to Discrete Mathematics	PC, U	✓		MATH:1860 & 2700
MATH:4060 (22M:151) Discrete Mathematical Models	PC, U		✓	MATH:2700
MATH:4080 (22M:126) Elementary Theory of Numbers	PC, U	✓		MATH:1860 & 2700
MATH:4090 (22M:114) A Rigorous Intro. to Abstract Algebra	PC, U, H		✓	MATH:3720
MATH:4200 (22M:118) Complex Variables	PC, U	✓		MATH:2850
MATH:4210 (22M:113) Foundations of Analysis	PC, U, H		✓	MATH:3770
MATH:4250 (22M:181) Introduction to Financial Mathematics	PC, U	✓		MATH:2850 or STAT:3120
MATH:4500 (22M:160) Intro. to Differential Geometry I	PC, U	✓		MATH:2850 & 2700
MATH:4510 (22M:161) Intro. to Differential Geometry II	PC, U		✓	MATH:4500
MATH:4610 (22M:140) Continuous Mathematical Models	PC, U	✓		MATH:3600
MATH:4740 Large Data Analysis	PC, U			MATH:2700, CS:1210 & STAT:2010 or 2020
MATH:4820 (22M:174) Optimization techniques	PC, U		✓	MATH:2700, 2850 & 3800
MATH:4860 (22M:178) High Performance & Parallel Computing	PC, U	✓		CS:2630 & MATH:2700

All first year math graduate courses are open to advanced undergraduates. Please make sure to talk to your advisor and the instructor before you register for these courses.

Course Number & Title		Fall	Spring	Prerequisites
MATH:5000 (22M:120) Abstract Algebra I	PC, U, H	✓		MATH:3720 or 4090
MATH:5010 (22M:121) Abstract Algebra II	PC, U, H		✓	MATH:5000
MATH:5200 (22M:115) Introduction to Analysis I	PC, U, H	✓		MATH:3770 or 4210
MATH:5210 (22M:116) Introduction to Analysis II	PC, U, H		✓	MATH:5200
MATH:5400 (22M:132) General Topology	PC, U, H	✓		MATH:3770 or 4210
MATH:5410 (22M:133) Introduction to Smooth Manifolds	PC, U, H		✓	MATH:2700, 2850 & 5400
MATH:5600 (22M:142) Nonlinear Dynamics with Num. Meth. Nonlinear Dynamics with Numerical Methods	PC, U, H	✓		MATH:3600 & (MATH:3770 or 4210)
MATH:5700 (22M:144) Partial Diff. Equations with Num. Meth.	PC, U, H		✓	MATH:2850 & 3600 & (MATH:3770 or 4210)
MATH:5800 (22M:170) Num. Analy.: Nonlinear Eq. Approx. Th	PC, U, H	✓		MATH:2700 & 2850
MATH:5810 (22M:171) Num. Analy.: Diff Eq. & Linear Algeb.	PC, U, H		✓	MATH:2700, 2850 & 3600

This is not a complete list of MATH courses, the courses MATH:5900 or higher are not included, since they are primarily for graduate students.