

Michigan Technological University

Minor in Mathematical Sciences

Program Code: SMAM, Academic Year 2020-21

Department of Mathematics

Total Credits Required: 18

Choose one course in Calculus I

Course	Credits
MA 1135 Calculus for Life Sciences (4)	
MA 1160 Calculus with Technology I (4)	
MA 1161 Calculus Plus w/Technology (5)	

Choose one course in Calculus II, Linear Algebra or Statistics

Course	Credits
MA 2160 Calculus with Technology II (4)	
MA 2320/MA 2321 Elementary Linear Algebra (2)	
MA 2330 Honors Elementary Linear Algebra (3)	
MA 2710 Introduction to Statistical Analysis (3)	
MA 2720 Statistical Methods (4)	

Choose at least one of the following courses:

Course	Credits
MA 3160 Multivariable Calculus with Technology (4)	
MA 3202 Introduction to Coding Theory (3)	
MA 3203 Introduction to Cryptography (3)	
MA 3520 Elementary Differential Equations (2)	
MA 3521 Elementary Differential Equations (2)	
MA 3530 Intro to Differential Equations (3)	
MA 3560 Math Modeling with Differential Equations (3)	
MA 3710 Engineering Statistics (3)	
MA 3715 Biostatistics (3)	
MA 3720 Probability (3)	
MA 3740 Stat Programming and Analysis (3)	
MA 3810 Intro to Actuarial Mathematics (3)	

Choose at least one course that emphasizes mathematical logic and reasoning:

Course	Credits
MA 3210 Introduction to Combinatorics (3)	
MA 3310 Introduction to Abstract Algebra (3)	
MA 3450 Introduction to Real Analysis (3)	
MA 3924 College Geometry with Tech (3)	
MA 4908 Theory of Numbers (3)	
MA 4330 Linear Algebra (3)	
MA 4760 Mathematical Statistics I (3)	

Elective Course: Choose another course from the previous list OR any 4000- level MA course (Except MA 4945) to reach 18 credits

Course	Credits
MA 4xxx	

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: MA1135 (MA1032 or MA1031 or ACT \geq 26 or SAT \geq 610 or ALEKS Math Placement \geq 76 or CEEB Calculus AB \geq 2 or CEEB Calculus BC \geq 2 or CEEB Calculus AB Subscore \geq 2), MA1160 (MA1032 or MA1031 or ACT \geq 29 or SAT \geq 680 or ALEKS Math Placement \geq 86 or CEEB Calculus AB \geq 3 or CEEB Calculus BC \geq 3 or CEEB Calculus AB Subscore \geq 3), MA1161 (MA1032 or MA1031 or ACT \geq 26 or SAT \geq 610 or ALEKS Math Placement \geq 76 or CEEB Calculus AB \geq 2 or CEEB Calculus BC \geq 2 or CEEB Calculus AB Subscore \geq 2), MA2160 (MA1160 or MA1161 or MA1135 or CEEB Calculus AB \geq 3 or CEEB Calculus BC \geq 3 or CEEB Calculus AB Subscore \geq 3), MA2320 (MA1160 or MA1161 or MA1135), MA2321 (MA2160), MA2330 (MA1160 or MA1161 or MA1135), MA2710 (MA1160 or MA1161 or MA1135), MA2720 (MA1020 or MA1030 or ACT \geq 22 or SAT \geq 540 or ALEKS Math Placement \geq 61 or CEEB Calculus AB \geq 2 or CEEB Calculus BC \geq 2 or CEEB Calculus AB Subscore \geq 2), MA3160 (MA2160 or CEEB Calculus BC \geq 3), MA3202 (MA2320 or MA2321 or MA2330), MA3203 (MA2320 or MA2321 or MA2330), MA3520 (MA2160 and (MA2320 or MA2321 or MA2330)), MA3521 (MA2160 and MA2321C), MA3530 (MA2160 and (MA2320 or MA2321 or MA2330)), MA3560 (MA2160 and (MA2320 or MA2321 or MA2330)), MA3710 (MA2160), MA3715 (MA1135 or MA1160 or MA1161), MA3720 (MA1160 or MA1161), MA3740 (MA2710 or MA2720 or MA3710 or MA3715), MA3810 (MA3160(C)), MA3210 (MA2320 or MA2321 or MA2330), MA3310 (MA2320 or MA2321 or MA2330), MA3450 (MA2160), MA3924 (MA2160 or MA2330), MA4330 ((MA2320 or MA2321 or MA2330) and MA3160), MA4760 (MA3720 or EE3180), MA4908 (MA3210 or MA3310 or MA3924)