Recommended Schedule for Math Majors Seeking Secondary Licensure

First and Second Years
Complete the following required courses:

Calculus I	Calculus II	Calculus III	
MATH 235 (4 credits)	**MATH 236** (4 credits)	**MATH 237** (4 credits)	
OR **MATH 231 and 232** (6 credits total)	[Prerequisite: MATH 235 or 232 or 234]	[Prerequisite: MATH 236]	

Intro to Probability & Statistics[1]	Discrete Mathematics	Linear Algebra[2]	Elementary Differential Equations[2]	Computers & Numerical Algorithms
MATH 229 and 329 (6 credits total) OR **MATH 318** (4 credits)	**MATH 245** (3 credits) [Prerequisite/Corequisite: MATH 236]	**MATH 300** (3 credits) [Prerequisite: MATH 236]	**MATH 336** (3 credits) [Prerequisite: MATH 236]	**MATH 248** (4 credits, but meets 5 hours per week) [Prerequisite: MATH 236]
[Prerequisites for 329: MATH 229 and 236] [Prerequisite for 318: MATH 236]				

After their first semester, math majors typically enroll in 2 or 3 math major courses per semester. For most students, it is <u>not</u> a good idea to enroll in more than 3 math major classes in a semester. In consultation with their advisors, students may decide to delay one or more first/second year courses until their third/fourth year. In making such a decision, students should pay close attention to the prerequisite requirements of the upper level courses to ensure that they complete prerequisites courses sufficiently early in their studies.

[1] MATH 229 and MATH 329 are recommended, but MATH 318 may be substituted for MATH 229 and MATH 329. For students making this substitution, a course with statistical data analysis (MATH 321, 322, 324, 327, or 354) is recommended.

[2] MATH 238 may be substituted for MATH 300 and MATH 336 if the student is completing a double major.

Third and Fourth Years
Complete the following required courses:

Elementary Number Theory	Abstract Algebra I	History of Mathematics
MATH 310 (3 credits, Spring 2023, Fall 2024, Spring 2026) OR **Real Number System** **MATH 315** (3 credits, Fall 2022, Spring 2024, Fall 2025) [Prerequisite for 310/315: MATH 245]	**MATH 430** (3 credits) [Prerequisite: MATH 245 and (300 or 238)]	**MATH 415** (3 credits, Spring) [Prerequisite: MATH 245]
Fund Concepts of Geometry **MATH 475** (3 credits, Fall) [Prerequisite: MATH 245]	**Advanced Calculus I** **MATH 410** (3 credits) [Prerequisite: MATH 245 and (300 or 238)]	**Connections in Mathematics** **MATH 470** (3 credits, Spring 2023, Fall only starting Fall 2023) [Prerequisite/Corequisite: MATH 410, 430, 475, and (318 or 329)]

Secondary education majors/minors have a substantial number of required education courses during their 3rd/4th years. These requirements impose some limitations on the number of math courses that students can take per semester during these years. Math majors seeking secondary licensure should consult with their math major advisor early in their time at JMU to plan their 3rd/4th year math major courses. Please consult materials from the College of Education for more information on education course requirements.

How to Use the Colors on This Sheet: The colors of the third/fourth year course titles indicate the pre/co-requisites of these courses according to the following key:

Blue = Prerequisite: MATH 245   **Green** = Prerequisite: MATH 245 and (MATH 300 or MATH 238)

Orange = Prerequisite/Corequisite: MATH 410, MATH 430, MATH 475, and (MATH 318 or 329)

The university catalog takes precedence over this document. Please consult the catalog for full information on requirements, prerequisites, course descriptions, and approved substitutions.

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