



Dear Student of the Class of 2021:

Welcome to Manhattan College! Our faculty and students are all looking forward to working with you in the years to come.

Whether your passion is science, engineering, business, education, or a major in the liberal arts, an important component of your requirements is the mathematical sequence required for each major. For example:

- some students in the School of Liberal Arts will want to understand how statistical tools are used for political polling. Others may use mathematical models to analyze economic behavior;
- students in the School of Business complete a two-semester sequence of courses covering mathematical tools used in finance, management, and other business disciplines;
- some students in the School of Education will want to understand how statistical tools are used in data analysis. Others, such as those students planning to teach a STEM subject or those studying health professions, may need to take a course in Pre-Calculus or Calculus;
- students in the School of Engineering complete at least a four-semester sequence in Calculus and Differential Equations;
- many students in the School of Science complete at least a two-semester Calculus sequence.

Because these courses form the mathematical basis for other courses in your major, we recommend that you complete this sequence as soon as possible in your college career.

In order to improve the likelihood of success in these courses, you will take a placement exam (referred to as the Test for Readiness and Aptitude in Mathematics, or TRAM) in advance of summer orientation to assess your level of readiness for enrolling in the appropriate level of mathematics courses. The TRAM covers a wide variety of skills from both Algebra and Trigonometry (there is no calculus on the exam), including:

Algebra

- Manipulating algebraic expressions
- Factoring/simplifying, solving equations, order of operations
- Solving inequalities and absolute value problems
- Working with numbers and expressions in the form of fractions, exponents, and logarithms
- Reading graphs and tables, and plotting functions in the xy-plane
- Finding compositions and inverses of functions
- Solving word problems

Trigonometry

- Evaluating trigonometric functions for common angles
- Solving trigonometric equations
- Plotting basic trigonometric functions
- Working with trigonometric identities

Two very useful online sites to refresh your knowledge are: www.purplemath.com and www.khanacademy.org, among many others. Also, Manhattan College has created a special, low-cost program in MyMathTest for practicing for the TRAM. For more information about how to register for this practice program, please visit the Manhattan College Orientation website at manhattan.edu/TRAM.

Please note that the use of calculators and cell phones is not permitted during the TRAM exam.

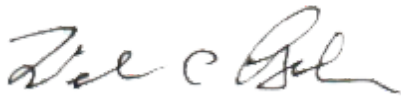
In order to prepare for this exam, we strongly urge that you review the topics listed above and practice doing some examples without the use of a calculator.

Students whose performance on this exam indicates proficiency in the skills will be placed in the appropriate calculus course for their major this fall. Based on your results, we may recommend that you take a free online summer course we offer to help you be successful in your courses next fall.

In the event that the exam indicates that you are not ready for calculus and that you need more review of your basic algebra and trigonometry skills, we will notify you and suggest opportunities for you to remedy the situation. We want you to succeed in your college career and want you to be prepared for the work ahead. You should be aware, however, that if you do not take a course at the right level you may be placing yourself in a situation where you will need to take the right courses at a later time in your program which may involve summer classes and cost extra tuition.

We congratulate you again on your decision to join Manhattan College, and look forward to being part of your journey.

Sincerely,

A handwritten signature in black ink, appearing to read "Will C. Clyde".

William C. Clyde, Ph.D.
Executive Vice President and Provost