



DEPARTMENT OF THE ARMY  
UNITED STATES MILITARY ACADEMY

West Point, New York 10996-1786

MADN-MATH

June 18, 2008

MEMORANDUM FOR MA103 Students, Department of Mathematics, USMA

SUBJECT: Fundamental Concepts Exam

1. Students enter USMA with different backgrounds in mathematics. Your success in college level math, science, and engineering depends on a firm understanding of pre-calculus material. We have identified those skills and concepts that all students entering MA103 must possess in order to effectively understand the concepts presented in this course and in the math, science, and engineering program. These skills can be found by navigating through the Fundamental Concepts link in the Course Admin section on the MA103 website at <http://www.dean.usma.edu/math/courses/MA103/index.htm>. Our experience indicates that if you lack a good understanding of these skills, you will most likely not perform to your full potential in subsequent math, science, and engineering courses. You should seek remedial assistance in any area in which you feel weak either with classmates or your instructor.

2. In order to assess a student's knowledge of fundamental skills and concepts, the Department of Mathematical Sciences administers two very important Fundamental Concept Exams (FCEs). You have already taken the first exam early in Cadet Basic Training. The second exam is given during the first month of MA103. For those cadets who fail to achieve at least an 80% on one of these two exams subsequent tests are usually given in October and November. Students must earn an 80% or greater on a fundamental concepts exam in order to be considered for advancement to the second core mathematics course. Failure to obtain an 80% or greater in at least one (including the exam given during the summer) may result in placement in a different core mathematics track (MA100 / MA101 Precalculus Mathematics sequence or other scheduled remediation such as repeating MA103). Students enrolled in MA100 / MA101 fall a semester behind in their mathematics studies and must "catch up" at some point; most are usually enrolled in a mathematics course during summer school in order to catch up.

3. Also under the Fundamental Concepts link on the MA103 website, you can find a list of properties and formulas you are expected to know that will enable you to solve many of the problems based on the required skills. They should be committed to memory. They are found at the Useful Formulas link, in the same location as the Fundamental Concepts.

4. Students who do not earn greater than or equal to 60% on the **first** FCE will automatically be enrolled in USMA's mandatory Saturday Study Period (SSP). These students will remain enrolled until they achieve greater than or equal to 80%. Students who do not earn greater than or equal to 70% on the **second** FCE (if not already enrolled) will automatically be enrolled in SSP. These students will also remain enrolled until they achieve greater than or equal to 80%. Students who do not earn greater than or equal to 80% on the **third** FCE (if not already enrolled) will automatically be enrolled in SSP until they are proficient in the required skills.

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SUBJECT: MA 103 Program Director's Memorandum

5. The requirement to achieve greater than or equal to 80% on the FCE should not be taken lightly. Because many students have a difficult time with this exam, I encourage you to start early in preparing for it. Time spent early preparing will save you much time later in the semester when you need it for other things.

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GERALD C. KOBYSKI  
LTC, EN  
Program Director