

Academic Math Placement (AMP) II

July 2022

Welcome to the University of Doha for Science and Technology! We are pleased to offer an opportunity for some students to take a second Math placement test, which could lead to an exemption from otherwise mandatory introductory Math courses.

What is AMP II?

AMP II measures key areas of competence in advanced topics relating to algebra, trigonometry, and pre-calculus.

Who is eligible to take AMP II?

If you scored at least 80% on the AMP I, you will be invited to take the AMP II. It is your choice whether you take this option.

When will the AMP II be administered?

If you are eligible, you will receive an invitation from the Math Department of the College of General Education in the first week of the semester.

What courses may I be exempted from?

AMP II Score	Exemption from
75% and above	<i>Depending on academic program:</i> MATH1010 Algebra & Trigonometry, or MATH1070 Applied Mathematics
85% and above	<i>Depending on academic program:</i> MATH1010 Algebra & Trigonometry, or MATH1070 Applied Mathematics, and MATH1020 Pre-Calculus (where required)

What is the format of AMP II?

AMP II consists of 60 multiple-choice questions administered in D2L over 2 hours.

What will happen if I do not achieve the score for course exemption?

Not achieving the required score for exemption will not impact your enrollment in the program or your UDST transcript in any way. You will be placed in the appropriate Math course according to your program study plan.

May I take the AMP II more than once?

You may only attempt the AMP II one time during your academic studies at UDST.

Other Useful Tips:

Calculators: The approved calculators for the AMP II are *Casio fx-85Es* and *Casio fx-991ES PLUS*. You must know how to use the calculator; there will be no help on how to use the calculator.

A formula sheet is neither required nor permitted during the AMP II.

Textbooks: The Mathematics Department recommends two resources to help you prepare for the AMP II (available in the UDST Library or for purchase in the UDST bookstore):

Miller, O'Neill and Hyde. (2018). *Intermediate Algebra* (6th ed.).
ISBN13: 9781264859283

Miller, J. and Gerken, D. (2018). *Precalculus* (2nd ed).
ISBN13: 9780078035609

Academic Math Placement II Topics

The 60 questions on the AMP II are based on learning objectives from the following topics in advanced mathematics:

- Trigonometric Functions
- Trigonometric Functions Defined on the unit Circle
- Trigonometric Expressions
- Radian & Degree Measure
- Trigonometric Equations
- Complex Numbers
- Logarithmic Equations
- Exponential Equations
- Writing Logarithmic Expressions as Single Logarithms
- Writing Logarithmic Expressions in Expanded Form
- Modelling Logarithmic Functions
- Modelling Exponential Functions
- Composition and Decomposition of Functions
- Inverse Functions
- Infinite Behavior of Functions
- Operations on Functions
- Applications of Functions
- Function Notation
- Even and Odd Functions
- Polynomial Functions
- Graphs of Quadratic Functions
- Transformations of Functions
- Piece-wise Defined Functions
- The Parabola
- Vertical Asymptotes
- Horizontal Asymptotes
- Graphs of Logarithmic Functions
- Graphs of Exponential Functions
- Quadratic Equations
- Literal Equations
- Rational Equations
- Absolute Value Equations
- Radical Equations
- Linear Inequalities
- Circle Equations
- Matrix Equations