



الجامعة الألمانية الأردنية  
German Jordanian University

**School of Basic Sciences and Humanities**  
**Important Announcement**  
**Mathematics Placement Test For Spring Semester (2018)**

**Please note that the Mathematics Placement Test is mandatory for all Engineering and Computer Science students.**

**Test will take place on:**

**Tuesday February 20 ,2018**  
**From 11:00am to 12:00pm**  
**Building H-Main Campus.**

**No student can register for Calculus I (Math101) without taking and passing this placement test.**

- Please plan to be at the school 30 minutes prior to the exam.
- No one will be admitted after a session begins
- If you pass the exam, then you'll be allowed to register for Math101 (Calculus I).
- If you fail the exam, you must register for Math099 (Pre-Math).
- No one will be allowed to take the exam more than once.
- No electrical devices including calculator will be allowed.
- You can take the exam either in Arabic or in English language.
- All questions must be completed by all students.
- The test consists entirely of multiple choice questions, each with four choices.
- Each question has only one correct answer.
- Time of the test is sixty minutes.

## Test Description

There are three broad categories of questions: mathematics basics, algebra, and trigonometry.

### 1. Basic Math Skills Section

Add, subtract, multiply and divide rational numbers

Use the order of operations correctly to simplify expressions.

Be familiar with introductory algebra skills, such as distributing and combining like terms.

Factor algebraic expressions, including quadratic expressions.

Simplify algebraic expressions.

Be able to use exponent rules.

Solve linear equations.

Know geometry definitions such as the definition for an equilateral triangle and the radius of a circle.

Find the perimeter, area, and volume of geometric figures.

### 2. Algebra Section

Add, subtract, multiply and divide polynomials.

Solve quadratic and rational equations.

Solve inequalities.

Solve systems of linear equations.

Solve equations with an absolute value.

Simplify radical expressions and solve radical equations.

Know the definition, notation, and interpretation of functions.

Be able to use the algebra of functions to solve problems. For instance, you should be familiar with composition of functions.

Understand and be able to solve problems with both rational and inverse functions.

Understand and be able to solve problems with exponential and logarithmic functions.

Solve problems related to the Theory of Equations, such as finding roots of polynomials and calculating the discriminant.

Know and be able to apply right triangle relationships, such the Pythagorean Theorem.

Know and be able to use the distance formula.

Solve problems that involve parallel and perpendicular lines.

### 3. Trigonometry Section

Know and be able to use basic trigonometry definitions and identities.

Use trigonometry to solve problems with triangles, such as finding the length of a side of a triangle using the sine function.

Know the graphs of trigonometric functions.