

# **Entrance Exam** for the School of Business

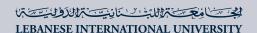
Every student applying to the school of Business must sit for an entrance exam in Mathematics S.E, (in addition to English). The followings clarify the main areas that candidates must concentrate on for the entrance exams. The candidate may write the entrance examination either in French Language or English Language.

Subjects at the back

## MATHEMATICS ENTRANCE EXAM (Non-Science):

- Exponents and radicals, Polynomials and special products, Factoring
- Graphs of equations, Linear equations in one variable, Quadratic equations, Linear Inequalities in one variable
- Linear equations in two variables, Functions and their graphs, Shifting, Inverse functions
- Polynomial and Rational Functions, Polynomial Division and synthetic Division
- Exponential and Logarithmic functions, their graphs and Properties, Exponential and Logarithmic equations
- System of Equations, Systems of Inequalities, Matrices and Determinants, Operations with matrices; elementary probability.

**Best of Luck!** 





#### Subjects for Biology and Chemistry Exams

#### **Biology:**

- Genetics (heredity, chromosomes, mitosis / meiosis, and DNA/RNA)
- 2. Immune system
- 3. Endocrine system
- 4. Nervous system
- 5. Reproductive system

#### **Chemistry:**

- Atomic structure and electron configuration, periodic properties and chemical reactions of elements.
- Basic concepts of mass relationship in chemical reactions and chemical equilibrium.
- Acid/base, thermo-chemistry, redox, chemical kinetics, properties of gases and functional groups in organic Chemistry.

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#### **Chemistry Entrance Exam:**

- Atomic structure and electron configuration, periodic properties and chemical reactions of elements.
- Basic concepts of mass relationship in chemical reactions and chemical equilibrium.
- Acid/base, thermo-chemistry, redox, chemical kinetics, properties of gases and functional groups in organic Chemistry.

## School of Engineering Entrance Examinations Guidelines

Every student applying to the school of engineering must sit for an entrance exam in Mathematics, Physics, and Chemistry, (in addition to English). The followings clarify the main areas that candidates must concentrate on for the entrance exams. The candidate may write the entrance examination either in French Language or English Language.

#### **Best of Luck!**

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## **Mathematics Entrance Exam** (Science):

- Quadratic equations, Linear equations in two variables
- Exponential and Logarithmic functions, their graphs and Properties
- System of Equations, systems of Inequalities
- Matrices and Determinants, Operations with matrices
- Rates of change, limits, continuity
- Inverse functions, trigonometric and hyperbolic functions, lines, planes, distances
- Derivatives, chain rule and parametric equations, implicit differentiation, mean value theorem, curve sketching, indefinite integral
- Separable and linear first order differential equations
- Integration rules, integration by substitution, definite integral, applications to area, distance, volume and arc-length
- Elementary probability
- Complex numbers, polar form, powers and roots of complex numbers.

### Physics Entrance Exam:

- Fundamentals of mechanics, including vectors, velocity and acceleration, projectiles in two motions, forces and Newton's laws, conservation of energy theorem, circular motion, work, linear momentum, oscillations
- Electric forces and Electric Fields, electric potential energy and voltage
- Magnetic Field
- Magnetic Field created by a current
- Electromagnetic and Self Induction
- · Resistors, capacitors
- Coils
- AC circuits (RC, RL and RLC series)
- Resonance
- Transformers, reflection and refraction, mirrors, thin lenses, and atomic physics.