HITSZ Undergraduate Program Entrance Test Syllabus

1. Mathematics

The Mathematics component emphasizes the critical areas of math essential for courses study at HITSZ. This section is structured into two modules: a multiple-choice segment featuring 25 questions, each worth 3 points, and a fill-in-the-blank segment comprising 5 questions, each valued at 5 points. The total score for this section is 100 points, with a testing duration of 45 minutes.

Prospective undergraduate students are required to complete this section, which encompasses the following domains and question types:

Advanced Mathematics primarily assesses knowledge of Linear equations in 1 variable, Linear equations in 2 variables, Linear functions, Systems of 2 linear equations in 2 variables, and Linear inequalities in 1 or 2 variables.
Algebra concentrates on Equivalent expressions, Nonlinear equations in 1 variable, Systems of equations in 2 variables, and Nonlinear functions.
Geometry and Trigonometry address Area and volume formulas; Lines, angles, and triangles; Right triangles and trigonometry; and Circles.
Problem-Solving and Data Analysis involve Ratios, rates, proportional relationships, and units; Percentages; One-variable data such as distributions and measures of center and spread; Two-variable data including models and scatterplots; Probability and conditional probability; Inference from sample statistics and margin of error; and Evaluating statistical claims from observational studies and experiments.

2. Physics

The Physics section, which is compulsory for applicants pursuing Engineering majors, consists of 6 multiple-choice questions, each worth 5 points. With a maximum score of 30 points, this section has a testing duration of 15 minutes. The topics included in the Physics section are as follows: **Kinematics, Mechanics, Energy and momentum, Rotational motion, Electrostatics,** and **Circuits.**