Building Construction Engineering
SYLLABUS

Polynomials
Polynomial division, factorization of polynomials, irreducible polynomials

Radicals
Square root of a non negative real number and its properties

Equations and inequalities
First and second degree algebraic equations and inequalities. Properties of the order relations in $\mathbb{R}$. Solving equations and inequalities using factorization of polynomials. Rational equations and inequalities. Simple irrational equations and inequalities. Absolute value equations and inequalities. Logarithmic equations and inequalities. Exponential equations and inequalities.

Plane Euclidean geometry
Properties of triangles and quadrilaterals. Properties of circles.

Plane coordinate geometry
Coordinate system. Straight lines. Intersection of straight lines. Parallel and perpendicular straight lines. Circles, parabolas, ellipses, hyperbolas.

Basic functions
Graph and properties of the exponential and logarithmic function. Sine, cosine and tangent of an angle. Trigonometry: addition and subtraction of angles, double angle formulas, half angle formulas. Application to triangles. Graphs of the sine, cosine and tangent functions.