

University of Szeged
Foundation Year

Curriculum (2016-2017)

SUBJECT: MATHEMATICS	
1st semester	
TOPIC	CLASS
	(2 hrs/week)
1.	Basic algebra: Sets of numbers, operations with numbers, order of operations, operations with signs, fraction, operations with fractions, power with integral exponents, power identities, normal form of numbers, laws on squares, laws on cubes, factorization, powers with fractional exponents (roots), root identities, rationalizing fractions
2.	Proportionality, percentages and inverse proportionality
3.	Linear equations: mixture problems, system of equations with applications
4.	Quadratic equations: Power function, elementary transformations, quadratic equations (basic concept, unified formula), quadratic inequalities
5.	Systems of equations: systems of linear and quadratic equations
6.	Functions and graphs I.: domain, range, properties of functions, linear functions, elementary transformations, graphical solution, role of fundamental set, role of the range, applications
7.	Basic trigonometry: Concept of cosine, sine, tangent and cotangent of an angle, trigonometric expression, addition theorems, Trigonometric functions, trigonometric equations with applications