

Course Title	Mathematics/Algebra				
Course Code	IMATH-105				
Course Type	Required				
Level	1 <sup>st</sup> Cycle				
Year / Semester	Second/Fall				
Teacher's Name	Maria Christodoulou				
ECTS	6	Lectures / week	13	Laboratories / week	0
Course Purpose and Objectives	<p>The main objectives of this course are to:</p> <ul style="list-style-type: none"> <li>• Develop methods for solving linear equations and inequalities in one variable.</li> <li>• Solve polynomial and polynomial equations.</li> <li>• Get introduced to the basic theory of equations and graphs.</li> <li>• Solve linear systems.</li> <li>• Get introduced to explicit, rational expressions.</li> </ul>				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ul style="list-style-type: none"> <li>• Solve linear equations of a variable and systems of linear equations with two variables.</li> <li>• Solve linear inequalities in one variable.</li> <li>• Mathematical operations to solve polynomials and solve polynomial equations.</li> <li>• Understand the theory of equations.</li> <li>• Draw a graph of a linear equation.</li> <li>• Operate with rational expressions and solve rational equations.</li> </ul>				
Prerequisites	None	Required	None		
Course Content	<ul style="list-style-type: none"> <li>- Linear equations and inequalities in a variable.</li> <li>- Absolute value of equations and inequalities in one variable.</li> <li>- Linear equations and inequalities in two variables and the graphical representation of the linear equation.</li> <li>- Systems of linear equations.</li> <li>- Integral exponents, polynomials and polynomial functions.</li> <li>- Polynomials, polynomial factorization and solution of polynomial equations.</li> <li>- Solving equations based on the theory of equations.</li> <li>- Solving equations with rational expressions.</li> </ul>				

Teaching Methodology	Lectures, examples, amphitheatric demonstrations in modern labs, studies and presentations, videos and transparencies, as well as, in class work.
Bibliography	Required: Dugopolski, ' <i>Intermediate Algebra</i> ' McGraw Hill 2009 0-073-53351-3
Assessment	Assignments, quizzes and final exams
Language	Greek