



<b>Course Code</b> MATH-105	<b>Course Title</b> Intermediate Algebra	<b>ECTS Credits</b> 6
<b>Department</b> Computer Science	<b>Semester</b> Fall / Spring	<b>Prerequisites</b> None
<b>Type of Course</b> Elective	<b>Field</b> Mathematics	<b>Language of Instruction</b> English
<b>Level of Course</b> 1 <sup>st</sup> Cycle	<b>Year of Study</b> 1st	<b>Lecturer(s)</b> Dr Stavros Pouloukas
<b>Mode of Delivery</b> face-to-face	<b>Work Placement</b> N/A	<b>Co-requisites</b> None

**Objectives of the Course:**

The main objectives of the course are to:

- Develop the methods for solving linear equations and inequalities in one variable.
- Provide students with deep knowledge of linear systems.
- Provide students with deep knowledge of polynomials and polynomial equations.
- Provide students with deep knowledge of rational expressions.

**Learning Outcomes:**

After completing the course students are expected to be able to:

1. Solve linear equations in one variable and systems of linear equations in two variables.
2. Solve linear inequalities in one variable.
3. Carry out operations involving polynomials, to fact or polynomials and to solve polynomial equations.
4. Carry out operations involving rational expressions and to solve rational expression equations.
5. Sketch the graph of a linear equation.

**Course Content:**

1. Linear equations and inequalities in one variable.
2. Absolute Value equations and Inequalities in one variable.
3. Linear equations and inequalities in two variables and the graph of the linear equation.
4. Systems of linear equations.
5. Integral exponents, polynomials and polynomial functions.
6. Factoring polynomials and solving equations by factoring.
7. Solving equations involving rational expressions.

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**Teaching Methods:**

Lectures, Handouts and Assignments

**Assessment Methods:**

2 Mid-Term Exams; Final Exam; Class Participation.

**Required Textbooks:**

<b>Authors</b>	<b>Title</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
Dugopolski	<i>Intermediate Algebra</i>	McGraw Hill	2009	0-073-53351-3

**Recommended Textbooks/Reading::**

<b>Authors</b>	<b>Title</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
Martin-Gay	<i>Intermediate Algebra</i>	Prentice Hall	2008	0-136-00729-6

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