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| **Subject** | **MATHEMATICS FOR FOOD SCIENCES**  **Type Semester ECTS Code**  **OBLIGATORY (O)** 1 6 130MFS101 |
| **Subject Lecturer**  **Subject Assistant**  **Subject Tutor** | **Laura Ajeti, PhD (c)** |
| **Goals and Objectives** | The main goal of this course is for the first year student to become familiar with some of the basic mathematical concepts such as: matrices and operations with them, determinants and their properties, systems of linear equations.  The student should be prepared with knowledge of functions, limits of strings and functions, derivatives of functions, indefinite and definite integrals, as well as knowledge of differential equations, which find application both in mathematical disciplines as well as in economic, natural, technical, and computer sciences etc. |
| **Expected Result** | - The student will be able to solve the matrix equation, the linear system using the Gaussian algorithm.   * Recognize and sketch graphs of basic functions, determine the domain of more complex functions, and identify basic curves given implicit or parametric parameters. * Calculate the boundary values of strings and functions. * Calculate the derivatives of functions, and determine the approximate value function. * Apply differential calculus to various problems related to the study of functions and their graphs. * Use basic methods of integration, and to connect the concept of definite and indefinite integrals. Apply the definite integral. |
| **Content** | **Weekly Plan Week**  Informing students with the course program. 1  Matrices (meaning and operations with matrices). 2  Determinants and their properties. Inverse matrix.3  Systems of linear equations. 4  Homogeneous equation systems. 5  The meaning of function,  properties and elementary functions. 6  Numeric Strings. Arithmetic and Geometric series. 7  String limit. Number .  8  **First Colloquium**  Limit of function and continuity of function. 9  The derivative of the function.  The application of the derivative. Rules of derivation. 10    Derivative of composite functions. 11    L'Hospital rules. Examining the properties of the  function through the derivative. 12  The Indefinite Integral.  Substitution and partial integration method. 13  The Indefinite Integral. Some properties of the  definite integral. Application to the definite integral.  **Second Colloquium 14**  **Final exam 15** |
| **Literature/References** | 1. Dr.Sc.Rexhep Gjergji: Mathematics for the students of MBE Faculty; draft book, Prishtinë. 2. Dr.sc Ajet Ahmeti, Mathematics for Economists, Prishtina 2003. 3. S.Shkodra, A.Jusufi: Lecture in a Dispense Form 4. H.Peci, M.Doko: Mathematics 1, Prishtina, 1996 5. Harshbarger R. & Reynolds J: Mathematical Applications, Boston New York(2004) |
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