



TEMATICA

Funcția didactică de Lector, poziția 44, din Statul de funcții al Departamentului de Informatică, Matematică și Electronică, anul universitar 2024-2025

1. Numerical series
2. Integration of real functions
3. Basic knowledge regarding integrals
4. Strings and series of functions
5. Systems of linear equations.
6. Vector spaces. Linear dependence and linear independence.
7. Real vector spaces with scalar product. Orthogonality.
8. Conics. Circle, ellipse, parabola, hyperbola.
9. Plain curves. Tangent and normal to a curve. The curvature of a curve.
10. Main concepts in statistics - Statistical population, sample, statistical unit and volume. Statistical variable
11. Statistical parameters - Parameters of central tendency (main trend); Parameters of structure; Parameters of variance
12. Statistical parameters - Parameters of central tendency (main trend); Parameters of structure; Parameters of variance
13. Mathematical Software Toolboxes - The use of specific software in the solving of mathematical problems; Types of mathematical software
14. Basic functions in Matlab - Functions for linear algebra and matricial calculus
15. Basic functions in Matlab - Functions for elementary math and trigonometric
16. Basic functions in Matlab - Functions for data analysis

References:

1. Mangatiana A. Robdera A Concise Approach to Mathematical Analysis, Springer 2003
2. David A. Brannan, A First Course in Mathematical Analysis, Cambridge University Press 2006
3. Leon, L., *Linear algebra with application*, Ed. Pearson, 2014.
4. McCrea, W., *Analytical Geometry of Three Dimensions*, Dover publications, 2015.
5. Sochi, T., *Introduction to Differential Geometry of Space Curves and Surfaces*, Createspace Independent Publishing Platform, 2017
6. D. Freedman, R. Pisani, R. Purves, *Statistics*, New York; London: Norton & Company, 1998
3. L.D., Hoffmann, *Calculus For Business, Economics And The Social And Life Sciences*, McGraw-Hill Book Company, 1986
7. A. Siegel, *Practical Business Statistics*, 6th Edition, Elsevier, Academic Press, 2011
8. G. Smith, *Essential Statistics, Regression, and Econometrics*, 1st Edition, Elsevier, Academic Press, 2011

8. S. Attaway, MATLAB: A Practical Introduction to Programming and Problem Solving, 6th edition, Boston University, Butterworth-Heinemann, 2022
9. P. I. Katan, Matlab for beginners, a gentle approach, revised edition, Katan, 2023,
10. H.-H. Lee, Programming and Engineering Computing with MATLAB 2023, SDC Publications, 2023

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