

Field name	Description
University	„CONSTANTIN BRÂNCUȘI” UNIVERSITY OF TÂRGU JIU
Faculty	Faculty of Economics
Department	Finance and Accounting
Position in the personal establishment	5
Function	Professor
Subjects from the curriculum	Mathematics applied in economics; Mathematical analysis; Probability and mathematical statistics.
Scientific domain	Mathematics
The description of the vacant position	<p>Post: University Professor, Position 5, Department of Finance and Accounting.</p> <p>The disciplines in the structure of the post are found in the curricula of the undergraduate degree programs of the faculty. Excluding the above mentioned post has taken into account that all the disciplines within the post are contained in the curricula of the most required Bachelor's degree programs, namely: FB, CIG, ECTS, M, IE. The opportunity to take this post into consideration has taken into account the prospect of accrediting the IE license program. At the same time, the awarding of this post as a university professor is justified by the need to develop a sustainable human resources policy aimed at strengthening research activities as a fundamental element of the teaching activity.</p>
Attributions	<p>Didactic norm (the disciplines of the post):</p> <p>Mathematics applied in economics -2 hours of teaching + 4 hours of seminar</p> <p>Mathematical analysis - 2 hours teaching + 2 hours seminar</p> <p>Probability and mathematical statistics - 2 hours teaching + 2 hours seminar</p> <p>- Research activities – according to the Law of Education nr. 1/2011 and the job description that will be an annex to the labor contract.</p>
Salary	8.596 RON
Date of announcement publication in the Official Gazette of Romania	December, 05, 2018
Period from the beginning to the ending of registration	December, 05, 2018 – January, 22, 2019
Date, day of the week and hour of the lecture	Thursday, 07 February, 2019, 10.00 a.m.

Place of the lecture	Faculty of Economics, Tineretului Street no. 4, Târgu-Jiu, Gorj
Date of contest lectures, courses etc.	Thursday, 07 February, 2019, 10.00 a.m.
Date of results announcement	07 February, 2019
Period from the beginning to the ending of contestations	08 February – 14 February, 2019
Themes of the competition tests	<p>For the candidates from the higher educational system is checked the accomplishment of minimum standards for the tenure of the position in agreement with the OMEN no. 6129/2016 and with the Methodology for the tenure of the teaching and research positions of "Constantin Brâncuși" University of Târgu Jiu.</p> <p>Candidates that come from outside the higher educational system have to give an additional public lecture, with the following themes:</p> <ul style="list-style-type: none"> - Linear Algebra: Matrices, determinants and systems of linear equations, Linear spaces. Linear dependence and linear independence. Bases and dimension. Linear subspaces. Linear operators and matrices. Eigenvalues and Eigenvectors. Cayley-Hamilton Theorem. Inner products and norms. The Gram-Schmidt orthogonalization process. Bilinear forms and quadratic forms; Elements of linear programming. - Functions of one real variable: Topological properties of the real numbers. Sequences and series of real numbers. Series of powers. Limit and continuity. Uniform continuity. Differential calculus. Sequences and series of functions; Integral calculus (Riemann integral and Lebesgue integral). Taylor's formula for single-variable functions. Concave and convex functions. Maxima and minima with applications to economics. - Real functions of several real variables: Topological properties of the n-dimensional Euclidean spaces. Sequences and series of vectors, Limit and Continuity. Uniform continuity. Partial derivatives. Jacobian matrix. Higher order partial derivatives. Hessian matrix. Differentials. Taylor's formula functions of several variables. Maxima and minima. Method of Lagrange multipliers for maxima and minima. Optimization problems in economics. - Multiple integrals and improper integrals: Double integrals. Iterated integrals. Change of variables in a double integral. Definition of an improper integral and types of improper integrals. Convergence of improper integrals. Improper integrals containing a parameter. Gamma function and beta function. - Probability Theory and Mathematical Statistics Field of events and Probability field. Conditional Probabilities and independence. Bayes' formula. Random variables, Expectation and variance of random variables. Normal random variables. Convergence of random variables. Chebyshev's inequality the weak law of large numbers. The strong law of large numbers. Functions of two random variables.

	<p>Covariance. Correlation. Conditional expectation. Confidence intervals and hypothesis testing.</p> <p>References</p> <p>[1] Josef Leydold, <i>Mathematics 1 for Economics - Linear Spaces and Metric Concepts</i>, http://statmath.wu.ac.at/courses/mvw_math1/download/Mathematics_1_oneside.pdf</p> <p>[2] Josef Leydold, <i>Mathematics 2 for Economics - Analysis and Dynamic Optimization</i>, http://statmath.wu.ac.at/courses/mvw_math2/download/Mathematics_2_oneside.pdf</p> <p>[3] John E. Hutchinson, <i>Introduction To Mathematical Analysis</i>, 1994, https://maths-people.anu.edu.au/~john/Assets/Lecture%20Notes/B21H_97.pdf</p> <p>[4] Walter Rudin, <i>Principles of Mathematical Analysis</i> (3rd edition, 1976) https://archive.org/details/RudinW.PrinciplesOfMathematicalAnalysis3eMGH19769780070542358353S/page/n3</p> <p>[5] Prasanna Sahoo, <i>Probability and Mathematical Statistics</i>, Department of Mathematics, University of Louisville, http://www.math.louisville.edu/~pksaho01/teaching/Math662TB-09S.pdf</p> <p>[6] Frederik Michel Dekking, Cornelis Kraaikamp, Hendrik Paul Lopuhaa, Ludolf Erwin Meester, <i>A Modern Introduction to Probability and Statistics</i>, Springer, 2005, https://cis.temple.edu/~latecki/Courses/CIS2033-Spring13/Modern_intro_probability_statistics_Dekking05.pdf</p>
Description of contest procedure	<p>The contest is run according to the contest methodology framework for the tenure of a teaching position and a research position in academic education approved by Government decision No. 457 of 04.05.2011, the National Education Law no. 1/2011, and Methodology for the tenure of teaching positions and research of Constantin Brâncuși " University "from Târgu Jiu.</p>
List of documents	<p>In order to take part in the contest and to apply for a teaching position, the candidate must supply a detailed file containing the following documents:</p> <p>A1. The application form, signed by the candidate accompanied by a statement on his own responsibility regarding veracity of the information submitted in the file; A2. Proposal of university career development of the candidate both from teaching and scientific research point of view; the proposal shall be drawn up by the applicant, shall include up to 10 pages and is one of the main criteria to separate candidates; A3. Curriculum vitae of the applicant in writing and electronic format which should include information on: studies, diplomas, professional experience and workplaces, research and development projects where he/she was a director and member of the project and obtained the grants, if there are such projects or grants, and specifying the source of funding for each one; information about awards or other items for the recognition of the applicant's scientific contributions; A4. List of scientific papers of the candidate in printed format (signed by every page). The complete list of works of the candidate should be the following: the list of maximum 10 papers considered to</p>

be most relevant to his/her professional achievements, which are included in electronic format in the file and which can be found in other types of papers referred to in complete list of works by the candidate; thesis or doctoral theses; patents and other intellectual and industrial property rights; books and chapters in books; papers / studies published in journals of the main international scientific flux; papers in extenso in the proceedings of the main international specialized conferences; other papers and scientific contributions or, where appropriate, of artistic creation; A5. Statement of standards fulfillment requirements for the contest of job position, filled up and signed by the candidate, in printed form (original, signed by each page); A6 Documents related to the degree of doctor (certified copy of doctoral diploma and if the original doctoral diploma is not recognized in Romania, the certificate of its recognition or equivalence, in authenticated copy or the copy of Ministerial Order confirming award of doctorate); A7. The summary of doctoral thesis in Romanian and in a foreign language (maximum one page for each language); A8. Other diplomas certifying the candidate's studies: copies of other diplomas attesting the applicant's studies (degree, Bachelor, Master / Postgraduate, certificate attesting psycho-pedagogical study) or, if original diplomas are not recognized in Romania, the certificates of recognition or equivalence; copies of other diplomas attesting the applicant's studies. The copies are signed by candidate for certification "according to the original"; A9. Transcripts of records, supplements of diploma papers or school situations issued for each cycle of studies; A10. Copy of the identity card; A11. Copies of documents evidencing the change of name, if is applicable (certificate of marriage or proof for the change of name); A12. Personal statement of the applicants that they are not in any circumstances of incompatibility laid down in Law 1/2011, the Law of National Education and the Framework Methodology issued at national level; A13. Medical certificate attesting that the candidate is able to carry out educational activity; A14. The referrers list with their contact details (for associate professor and professor positions): at least 3 personalities in the same subject, from Romania or abroad, outside CBU, who agreed to write letters of recommendation regarding the candidate's professional qualities; A15. The proof of the fee payment to apply for the position; A16. Statement of assuming full responsibility, in original, (holograph) signed by the candidate (the declaration must assume correctness of the data included in the file and the fact they refer to his /her own activities and achievements, otherwise the candidate facing the consequences of false statements, according to the law); A17. The portfolio including maximum 10 of the candidate's papers considered to be the most representative, scanned on electronic support (CD). Besides, the electronic

	support will include, also, the list of candidate's papers according to A4, in Word format.
Return address for the competition file	"Constantin Brâncuși" University of Târgu Jiu, Unirii Street, no. 36, Târgu Jiu, county Gorj
Comission	
Methodology	Upload doc, docx or PDF files. The maximum accepted size of a file is of 10MB.