

Item name	Description
University	“Constantin Brâncuși” University from Târgu -Jiu
Faculty	Engineering
Department	Energy, Environment, and Agrotourism
Position in the hierarchy of functions	3
Function	University Professor
Disciplines from the education curriculum	Environmental Protection Paedology Agrochemistry
Scientific field	Engineering and Management in Agriculture and Rural Development
Job description of the position posted for competition	University Professor Position 3 – Department of Energy, Environment, and Agrotourism/Faculty of Engineering - a position for a university professor, including teaching activities in the disciplines specified in the announced position, which are part of the curriculum of educational programs within the faculty. Additionally, the position involves not only teaching activities but also evaluation, tutoring, for the disciplines outlined in the announced position, as well as coordinating diploma projects. The position is open for an indefinite period
Duties	Weekly teaching activities include: - 2 hours of lecture in Environmental Protection; - 3 hours of lecture in Paedology; - 3 hours of lecture and 2 hours of laboratory in Agrochemistry. Additionally, the position involves scientific research activities in the field, in accordance with Higher Education Law no. 199/2023 and the job description, which will be annexed to the employment contract.
Base salary	12.983 lei
Date of publication in the Official Gazette	29.11.2023
Start and end period of registration	29.11.2023 – 16.01.2024
Date, day and time of the oral presentation	01.02.2024 , 10 a.m.
Location of the lecture	Engineering Faculty Sala HUB , Calea Eroilor Street, no.30, cod 210135, Târgu-Jiu, Gorj.
Dates for the competition tests, including lectures, courses, etc.	01.02.2024
Date of result communication	01.02.2024
Beginning and end period for appeals	02.02.2024 -06.02.2024
Topics of the competition tests	For candidates from higher education, compliance with the national minimum standards for the position of professor is verified in accordance with Higher Education Law no. 199/2023, Order MENCȘ no. 6129/20.12.2016, and the Methodology for filling teaching and research positions at the University "Constantin Brâncuși" in Târgu Jiu. Candidates from outside the higher education system also

undergo a test consisting of a public lecture, with the following topics:

I. Discipline: ENVIRONMENT PROTECTION

1. Air Quality Protection

1.1. Factors influencing air pollution and atmospheric self-purification

1.2. Sources of air pollution (natural and anthropogenic)

1.3. Air pollutants and their physico-chemical and toxicological properties

1.4. Effects of polluted air on the environment and the human body (Acid Rain, Smog, Ozone Layer Depletion, Greenhouse Effect)

2. Soil Quality Protection

2.1. Causes of soil pollution

2.2. Types of soil pollution and sources of pollutants (physical, chemical, and biological pollution)

2.3. Influence of polluted soil on water, plants, and animals

2.4. Soil quality protection

3. Water Quality Protection

3.1. Sources of water pollution and pollutants

3.2. Effects of pollution on water quality

3.3. Self-purification of surface waters

Bibliography

1.Constantinescu G.C., *The Climate of the Environment – Aero chemistry*, Uni-Press-C-68 Publishing House, Bucharest, 2002

2.Negoiu A., Kriza A., *Inorganic pollutants in the air*, Academia Publishing House, Bucharest, 1997

3.Constantinescu G.C., *Environmental Chemistry. Hydrochemistry*, UNI-PRESS C-68 Publishing House, Bucharest, 2001

4.Negulescu M., Antoniu R., Rusu G., Cuşa E., *Water Quality Protection*, Tehnical Publishing House, Bucharest, 1982

5.Pătroescu C., Gănescu I., Papa I., *Water Analysis*, Sitech Publishing House, Craiova, 2000

6.Rădescu C., *Protection of Water Quality*, Didactic and Pedagogic Publishing House, Bucharest, 1971

7. Corneliu Răuță, Stelian Cârstea, *Prevention and Combating of Soil Pollution*, Ceres Publishing House, Bucharest, 1983

II. Discipline: PEDOLOGY

1. Components of Soil (solid part, liquid part, gaseous part)

1.1. Mineral components. Parent rocks. Agents and formation processes

1.2. Organic components. Sources of organic matter. Transformation processes. Humic substances

1.3. Liquid part. Forces acting on water in the soil. Forms of water in the soil. Water regime. Hydro physical indices

1.4. Gaseous part. Soil properties for air. Soil thermal regime

2. Soil Formation

2.1. Internal organization of the soil. Soil profile

2.2. Paedogenetic factors

3. Physical, Chemical, and Biological Properties of Soil

4. Soil Biocenosis

- 4.1. Soil microflora
- 4.2. Transformations produced by biological activity in soil chemistry
- 4.3. Soil macrofauna
- 5. Soil Fertility

Bibliography

1. Demeter T., *General Paedology*, Credis Publishing House, Bucharest, 2009
2. Blaga Gh., Filipov F., Rusu I., Udrescu S., Vasile D., *Paedology*, AcademicPress Publishing House, Cluj Napoca, 2005
3. Mihalache M, *Pedology – Genesis, Properties, and Taxonomy of Soils* Ceres Publishing House, Bucharest, 2006
4. Florea N., Dumitru M., *Soil Science in Romania in the 20th Century*, Book for All Publishing House, Bucharest, 2002

III. Discipline: AGROCHEMISTRY

1. Agrochemistry – an interdisciplinary science
2. Agrochemical fundamentals of fertilization in relation to plant requirements
 - 2.1. Chemical composition of plants
 - 2.2. Root absorption of nutrients
3. Soil – the natural environment for plant nutrition and the application of fertilizers and amendments
 - 3.1. Phases and components of soil
 - 3.2. Soil quality indicators
 - 3.3. Retention and mobility of nutrients in the soil
 - 3.4. Plant requirements regarding soil reaction and correction of soil acidity, alkalinity, and salinity
4. Agrochemistry of nutrient elements
 - 4.1. Agrochemistry of major macroelements nitrogen, phosphorus, and potassium
 - 4.2. Agrochemistry of secondary macroelements sulphur, magnesium, calcium
 - 4.3. Agrochemistry of microelements iron, manganese, zinc, copper, boron, molybdenum
 - 4.4. Agrochemistry of complex fertilizers
 - 4.5. Natural organic fertilizers

Bibliography

1. Mihai Rusu, Marilena Mărghițaș, Ioan Oroian, Tania Mihăiescu, Adelina Dumitraș, *Monograph on Agrochemistry*, Ceres Publishing House, Bucharest, 2005
2. Gheorghe Budoï, *Agrochemistry I - Soil and Plant*, Didactic and Pedagogic Publishing House, R.A., Bucharest, 2000
3. Radu Lăcătușu, *Agrochemistry*, Terra Nostra Publishing House, Iași, 2006
4. Avarvarei I., Davidescu Velicica, Goian M., Mocanu R., Caramete C., Rusu M., *Agrochemistry*, Sitech Publishing House, Craiova, 1997
5. Borlan Z., Hera Cristian, Dornescu D., Kurtinecz P., Rusu M., Buzdugan I., Tănase Gheorghe, *Fertility and Soil Fertilization*, Ceres Publishing House, Bucharest, 1994

	6.Davidescu D., Davidescu Velicica, <i>Horticultural Agrochemistry</i>, Romanian Academy Publishing House, Bucharest, 1992 7.Dorneanu Aurel, <i>Guiding Soil Fertilit</i>, Ceres Publishing House, Bucharest, 1976 8. Mocanu R., Mocanu Ana Maria, <i>Agrochemistry</i>, Universitaria, Publishing House Craiova, 2003 9. Sara F., <i>Agrochemistry</i>, Eurobit Publishing House, Timișoara, 2007 10.Davidescu D., Calacea L., Davidescu Velicica, <i>Chemical Protection in Agriculture</i>, Romanian Academy Publishing House, Bucharest, 1992.
Description of the Competition Procedure	The competition takes place in accordance with the Competition Framework Methodology for filling vacant teaching and research positions in higher education approved by GD no. 457 of 04.05.2011, with subsequent amendments, Higher Education Law no. 199/2023, with subsequent amendments and the Methodology for the occupation of teaching and research positions of the "Constantin Brâncuși" University of Târgu Jiu approved in the Senate meeting of 27.10.2022.
Documents List	A1. Competition registration request, signed by the candidate, which includes a self-declaration regarding the accuracy of the information presented in the file; A2. Proposal for the candidate's career development, both from a didactic and scientific research activities perspective; the proposal is drafted by the candidate and should not exceed 10 pages; A3. Original curriculum vitae of the candidate, signed by the candidate on each page, which must include: information about completed studies and obtained diplomas; professional experience and relevant employment positions; information about research and development projects led by the candidate as project director or as a member, specifying the funding source for each; information about awards or other recognition of the candidate's scientific contributions; other relevant information. A4. List of the candidate's works in printed format (in the original, signed on each page) will be structured as follows: the list of up to 10 works considered by the candidate to be the most relevant for their professional achievements, which are also included in electronic format in the file and can be found in other categories of works provided by this article; doctoral thesis or theses; books and chapters in books; articles/studies published in journals from the main international scientific flow; publications in full, appearing in the works of the main international conferences in the specialty; research-development-innovation projects based on a contract/grant led by the candidate as a project director or in which they participated as a member, specifying the funding source for each; patents and other industrial property titles; other scientific works and contributions or, as the case may be, from the field of artistic creation;

A5. The verification sheet of compliance with the specific standards of the position, completed and signed by the candidate in printed format (in the original, signed on each page);

A6. Documents regarding the possession of the doctorate diploma. The legalized copy of the doctorate diploma and, if the original doctorate diploma is not recognized in Romania, the certificate of recognition or equivalence, in legalized copy, or the copy of the Minister's Order confirming the award of the doctorate title.

A7. Summary of the doctoral thesis in Romanian and in a language of international circulation (maximum one page for each language);

A8. Other diplomas attesting the candidate's studies: copies of other diplomas attesting the candidate's studies (high school diploma, bachelor's, master's/advanced studies, the Certificate attesting to psychopedagogical training) or, in case the original diplomas are not recognized in Romania, certificates of recognition or equivalence; copies of other diplomas attesting the candidate's studies. The copies are signed by the candidate for certification as "true to the original";

A9. Transcript of academic records, diploma supplements, or school records issued for each cycle of studies;

A10. Copy of the identity card certified by the candidate as "true to the original" or, if applicable, the passport or another identity document drawn up for an equivalent purpose to the identity card or passport;

A11. Certified copies by the candidate as "true to the original" of documents attesting to the change of name, if applicable (marriage certificate or proof of name change);

A12. Candidate's self-declaration that they are not in any situation of incompatibility;

A13. Medical certificate indicating the candidate's fitness to carry out teaching activities.

A14. List of referees with their contact details: for the position of university professor, at least 3 names and contact addresses of personalities in the respective field, from within the country or abroad, external to the higher education institution for which the position is announced, who have agreed to write recommendation letters regarding the professional qualities of the candidate;

A15. Copy of the minister's order regarding the conferment of the status of doctoral supervisor, or, if applicable, a copy of the habilitation certificate (only for the position of professor/Associate Professor I).

A16. Declaration of responsibility, in the original (handwritten) signed by the candidate. The declaration must affirm the correctness of the data in the file and that they refer to the candidate's own activities and achievements; otherwise, the candidate bears the consequences of false statements, in accordance with the current legislation;

A17. Folder containing a maximum of ten of the candidate's most significant works, in scanned electronic format (CD/DVD), while books and chapters from books will be

	submitted in physical format. In addition, the electronic support will include the candidate's list of works according to A4 in Word format; A18. Proof of payment of the registration fee for the competition. A CD/DVD or other electronic format containing the entire scanned content of the competition file, including the folder with the 10 significant works, must be attached to the competition file for transmission to the competition committee.
The address where the competition file is to be sent	"Constantin Brâncuși" University from Târgu-Jiu, Strada Tineretului, nr. 4, Târgu-Jiu, Gorj.
Committee	
Methodology	Files with the extension doc., docx. or PDF. are uploaded. The maximum supported file size is 10MB.

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Univ. Prof. Dr. Eng. Cristinel Popescu

Department Director,

Ass. Prof., Ph.D. Eng. Cristinel Racocanu