



CALL FOR FACULTY POSITION
ANNOUNCEMENT 23/2025/CENA/DVACAD

APPLICATIONS ARE NOW OPEN FOR THE SELECTION PROCESS FOR A DOCTOR PROFESSOR POSITION AT THE CENTER OF NUCLEAR ENERGY IN AGRICULTURE, UNIVERSITY OF SÃO PAULO, BRAZIL.

The Director of the Center of Nuclear Energy in Agriculture, University of São Paulo (CENA/USP), Brazil, announces all interested persons that, per the decision reached at the ordinary session of the Deliberative Council held on June 10th, 2025, applications are open for 90 (ninety) days, **from July 15th, 2025, at 8 a.m., to October 13th, 2025, at 5 p.m. (GMT -3)**, for the selection process of titles and examinations to fill one (1) position of Doctor Professor, position n° 1264036, in full-time dedication service.

The position requires commitment to teaching and ability to conduct independent research in the study area: **"Isotopes in Soil Fertility and Plant Nutrition"**. The selection process will comprehend the following program:

- Radioactive and stable isotopes in soil and plant fertility
- Principles and concepts of isotopic tracers. Isotopic dilution. Detection techniques: precautions and limitations.
- Isotope study techniques: Assessment of soil and plant nutrient availability by isotopic dilution. E (exchangeable), L (Larsen) and A values (availability of a nutrient in the soil measured quantitatively and expressed in terms of a standard fertilizer) and specific activity ratios. Fertilizer efficiency and its residual effect. Nutrient in the plant from the soil or from the fertilizer.
- Plant marking and applications: Green manures and crop residues. Soil organic matter. Nitrogen fixation by legumes. Studies of the root system.
- Nitrogen levels and forms in soil and plants: Addition and losses. Mineralization and immobilization. Assessment of nitrogen availability for plants.
- Phosphorus levels and forms in soil and plants: Desorption and adsorption. Availability in soil and factors that affect it. Methods for assessing availability.
- Potassium levels and forms in soil and plants: Dynamics and availability in soil for plants. Assessment of availability.
- Sulfur, calcium and magnesium levels and forms in soil and plants: Dynamics in soil, availability for plants and factors that affect it. Assessment of availability in soil and plants.
- Micronutrient levels and forms in soil and plants: Dynamics of micronutrients in soil. Factors that affect availability. Assessment of availability in soil.
- Analytical, conventional and isotopic techniques for determining nutrients in soil and plants and synthesis of labeled compounds. Conventional, biochemical and isotopic applications and methods for evaluating the nutritional status of plants.
- Analytical, conventional and isotopic techniques for determining heavy metals in soil and plants. Natural and anthropogenic sources of contamination. Assessment of the bioavailability of metals and risks to human health and the environment.
- Use of isotopes in studies of root absorption, transport and redistribution of nutrients in plants. Nutrient absorption by leaves and redistribution in plants. Assessment of fertilizer efficiency.



The selection process will be governed by Brazilian constitutional principles, notably that of impersonality, as well as by the provisions of the Statute and General Rules of the University of São Paulo and the Internal Rules of the Center of Nuclear Energy in Agriculture.

The selection process will be carried out according to objective criteria, in two stages, through the attribution of scores in exams, divided as follows:

1st stage (eliminary) - written exam (weight 1)

2nd stage:

I) evaluation of the Memorial with public proof of argumentation (weight 4)

II) didactic exam (weight 2)

III) presentation of the research project and respective arguments (weight 3)

The exams can be performed in Portuguese or English.

The call for applicants to take the exams will be published in the Official State Gazette. Candidates who present themselves after the established time will not be able to take the exams.

The official announcement in Portuguese is available at <https://uspdigital.usp.br/gr/admissao> where registration applications must be made during the period stated above.