

CALL FOR FACULTY POSITION

ANNOUNCEMENT 20/2025/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 3th, 2025, at 8 a.m., to October 1st, 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° 1264001, in full-time dedication service.

The position requires commitment to teaching and ability to conduct independent research in the study area: **“Soil Carbon and Greenhouse Gases in Natural Areas of Brazilian Biomes”**. The selection process will comprehend the following program:

- Biogeochemical processes of carbon and nitrogen in natural ecosystems.
- Generation, transformation and emission of CO₂, CH₄ and N₂O: microbiological, physicochemical and ecological aspects.
- Soil as a source or sink of Greenhouse Gases (GHG) in Brazilian biomes.
- Differences in dynamics of carbon and gases between humid biomes (e.g.: Amazon, Atlantic Forest, Pantanal) and dry biomes (e.g.: Cerrado, Caatinga).
- Role of vegetation, seasonality and climate in soil gas fluxes.
- Natural sources and GHG emission pathways in the main biomes of Brazil.
- Influence of land use, climate change and anthropogenic disturbances on GHG emissions.
- Soil carbon stocks: variations between natural, regenerating and anthropized areas.
- Role of organic matter and plant simulation in C and N cycles.
- GHG monitoring: static/dynamic chambers, eddy covariance towers and modeling of fluxes in natural landscapes.
- Use of stable isotopes ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) to identify sources, processes and emission pathways.
- Estimation of carbon stocks: sampling, physical-chemical characterization and use of GIS and remote sensing.
- Integration of field data, global banks and modeling for regional scaling of emissions.
- Role of natural ecosystems in climate change mitigation: ecosystem services and carbon sequestration.
- Scientific syntheses and international reports on GHG (e.g. IPCC - Intergovernmental Panel on Climate Change): advances and knowledge gaps.
- Current and future challenges for climate policies and conservation.



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.