

CALL FOR FACULTY POSITION
ANNOUNCEMENT 22/2025/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 10th, 2025, at 8 a.m., to October 8th, 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° 1264010, in full-time dedication service.

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

1. Fundamentals of Ecohydrology

- Fundamentals of water-soil-vegetation-atmosphere interactions.
- Transfer processes between soil, vegetation and atmosphere. SVAT models (soil-vegetation-atmosphere transfer).
- Bio-hydrological regulation of water fluxes in ecosystems by vegetation
- Scale in ecohydrology. Microscale, plot scale, hillslope scale, river basin scale, regional scale and continental scale.
- Upscaling and downscaling in ecohydrological modeling.

2. Components of Ecohydrology

- Water sources in ecosystems.
- Relationship between temperature, precipitation and biome type. Whitaker diagram.
- Relationship between water quality, vegetation and plant production.
- Water balance of soil water and the critical zone.
- Relationship between evapotranspiration and plants water availability.
- Plant growth limited by water and osmotic stress.
- Ecosystems spatial adaptation by water availability: strips, patches, corridors, edges.
- Vegetation types Zonality and intra-zonality and their ecohydrological interpretation.

3. Applications of Ecohydrology

- Integrated ecohydrology in water resource management in humid, subhumid and semi-arid conditions.
- Ecological restoration of rivers, springs and wetlands.



- Mitigation of floods and droughts through nature-based solutions.
- Resilience of socioecological systems in the face of climate and land use changes.

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.