

NOTICE DVACAD/IEE-USP/003/2022 (ABSTRACT)

The Dean of the *Instituto de Energia e Ambiente da Universidade de São Paulo* announces the opening faculty position (position 1236334, full-time position service), specialty “Energy Analysis and Planning.” Interested applicants should hold a Ph.D. The position requires a commitment to teaching and the ability to conduct independent research. Applications will be accepted between December 1st, at 8 a.m., to January 29th, at 5 p.m. (GMT-3). The entry-level monthly salary (MS3 level) is R\$ 13,357.25 plus benefits.

The public competition will cover the following program:

1. Concepts and principles of thermodynamics: energy as a natural phenomenon;
2. Social appropriation of energy, human evolution and the great revolutions of Humanity (Hunter-gatherers; Agricultural Revolution; Industrial Revolution);
3. Energy demand analysis and forecasting methods (Econometric, Technical-Economic, Structural based on End Uses);
4. Energy conversion processes, efficiencies and limits for end uses (Lighting; Cooling; Air conditioning; Heat pumps);
5. Energy conversion processes, efficiency and limits for end uses (Heating; Thermal processes; Combustion, process heat and cogeneration);
6. Energy conversion processes, efficiencies and limits for end uses (Stationary driving force; Vehicular driving force);
7. Energy demand analysis and forecasting methods (Econometric, End Uses based Technical-Economic or Structural methods)
8. Energy Reserves, Resources and Energy Supply;
9. Characterization of renewable and non-renewable sources (energy, power and ramp);
10. Energy resources: Oil, Coal, Nuclear
11. Energy Resources: Hydro, Wind, Solar, Bioenergy.
12. Economics of energy infrastructure networks;
13. Economic regulation of natural monopolies;
14. EROI (Energy Return on Investment);
15. Energy Efficiency: economic analysis of possibilities and limits;
16. Concept of Sustainability - Historical and theoretical elements for a critical reflection (Neoclassical Economics; Ecological Economics; Ecological Marxism).

The public competition will be governed by Brazilian constitutional principles, notably that of Impersonality, as well as by the Statute and the General Regulations of the Universidade de São Paulo and the Regulations of the Instituto de Energia e Ambiente.



Applications must be submitted exclusively via the website <https://uspdigital.usp.br/gr/admissao> in the period indicated above. The candidate must submit an application letter to the *Instituto de Energia e Ambiente* Director.

More information and rules relevant to the public competition of titles and tests are available to interested parties at the Academic Division of the *Instituto de Energia e Ambiente da Universidade de São Paulo*, located at Av. Professor Luciano Gualberto, 1289, Building F, rooms F-14 and F-21, Telephone 5511-3091-2505 and 5511-3091-2524, electronic address divisaoacademica@iee.usp.br, or on our website [Academic Division | Institute of Energy and Environment - IEE/USP](#)