

Institute of Geosciences, University of São Paulo (IGc-USP)

Official Public IGc-USP Notice N° 33/2022

Date: November 29, 2022

Applications are now open for the Selection Process for a Doctor Professor Position at the Department of Sedimentary and Environmental Geology (GSA) of the Institute of Geosciences of the University of São Paulo (IGc), main campus of the University of São Paulo (USP), in São Paulo, Brazil.

The Director of the Institute of Geosciences of the University of São Paulo (IGc-USP) hereby informs all interested persons that, per the decision reached at the Regular Meeting of the Congregation held on November 16th, 2022, applications are open for 90 (ninety) days, beginning at 8:00 am (Brasília time, BRT) on December 1st, 2022 and ending at 5:00 pm (Brasília time, BRT) on February 28th, 2023, for the selection process of titles and examinations to fill one (1) position of Ph.D. Professor, in Full-Time Dedication to Teaching and Research (RDIDP in the Portuguese acronym), position N° 1093711, with a salary of R\$ 13,357.25 (thirteen thousand, three hundred and fifty-seven reais and twenty-five cents) within the subject area of Mineral Resources, under the terms of article 125, § 1 of the General Regulations of USP and the following programmatic themes:

GSA0405 - MINERAL EXPLORATION:

1. Objectives of mineral exploration. Concepts of potential, resource and reserve. Exploratory models. Distribution of chemical elements and mineral deposits in the Earth's crust. Mineral research strategies and planning. Discovery factor vs search time. Risks and investments. Application for mineral research and mineral exploration management.
2. Mineral exploration planning: selection of geological environments and geological reconnaissance. Use of remote sensing and aerogeophysics. Integration and interpretation of regional data using Geographic Information System (GIS), including public databases, geological databases, regional geological, metallogenetic and mineral potential maps, registration of mineral occurrences, regional geophysical and geochemical surveys. Aspects of public policy on mineral resources and legislation. Target selection and generation criteria.
3. Surface prospecting. Geological mapping techniques. Regional current sediment and follow-up. Regular mesh prospecting.
4. Geochemical soil and lithochemical prospecting. Digging of wells and trenches, and their mapping. Sampling techniques and sample preparation. Importance of lithological, climatic and pedogenic controls. "GeoGas and MMI", Orientative Geochemistry. Analytical methods and their application. Data processing.
5. Airborne and terrestrial geophysical prospecting: gravimetry, induced potential, electric and electromagnetic, seismic, magnetic, magnetotelluric, radiometric and thermal methods.
6. Subsurface prospecting. Exploratory drilling and three-dimensional delimitation of mineralized bodies and their resources. Drilling methods: Auger, bench drill, RAB, Rock Drilling, roto-percussive drilling, reserve circulation (RC), diamond rotary drilling. Usage

criteria, limitations and reliability. Management of drilling programs. Description and sampling of drill cores; Geological sections.

7. Unconventional methods in mineral exploration.
8. World and Brazilian panorama of Mineral Exploration.
9. Examples of success in Mineral Exploration. Case studies.

GSA0418 - ECONOMIC GEOLOGY:

1. Concepts: classification and economic, social and political meanings of mineral resources. Abundance, scarcity and depletion of mineral resources: problems related to medium and long-term supply and demand for mineral commodities.
2. Notions of Mineral Economy.
3. Types of ores, applications and specifications, geoeconomic parameters related to mineral commodities for the steel industry, base metals, rare and precious, industrial, chemical, agricultural and civil construction.
4. The mineral industry and mineral processing. Primary and industrialized mineral commodities. Recycling. International reservations and demands.
5. Brazilian mineral panorama: reserves, production, consumption, export and import of mineral raw materials and their derivatives. National mineral production and its share in the gross domestic product. Projected national and international demands and development prospects.
6. Geological potential of the main geotectonic provinces in Brazil.

The selection process will be governed by constitutional principles, notably that of impersonality, as well as the provisions of the Statute and the General Rules of the University of São Paulo and the Rules of the Institute of Geosciences of the University of São Paulo, and the determinations below:

1. Candidates are required to apply online exclusively through the link <https://uspdigital.usp.br/gr/admissao> within the period indicated above. Candidates must submit a request to the Directorate of the Institute of Geosciences of the University of São Paulo, containing the identification of this notice (**Official Public Notice IGc-USP N° 33/2022**), personal information (name, RG, CPF, nationality, marital status, landline and cellphone numbers, residential and electronic addresses), and indication of the knowledge area (**Mineral Resources**) along with the following documents:

I – detailed Memorial and proof of the published works, the relevant activities carried out related to the selection process and other information that allows the evaluation of merits, in digital format;

II – proof that the candidate holds a Doctor's degree, granted or acknowledged by USP, or nationally acknowledged;

III – proof of discharge from military service for male candidates;

IV – electoral discharge certificate or detailed certificate issued by the Electoral Justice less than 30 days before the beginning of the enrollment period.

2. The Congregation of the IGc-USP will evaluate applications in their formal characteristics and publish the final decision in an official notice.

Single Paragraph – The selection process will take place after the application is accepted, within a period of 30 (thirty) to 120 (one hundred and twenty) days, from the date of publication in the Official State Gazette of the approval of applications, in accordance with Article 134, single paragraph, of the General Regulations of USP.

3. 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 2)
- 2nd stage:
 - I) Evaluation of the Memorial with public proof of argumentation (weight 4)
 - II) Didactic exam (weight 4)

§ 1 - The call for applicants to take the exams will be published in the Official State Gazette.

§ 2 - Candidates who present themselves after the established time will not be able to take the exams.

I – First stage: WRITTEN EXAM – Eliminary Character

The written exam will deal with matters of general and doctrinal order and will be carried out in accordance with the provisions of art. 139, and its single paragraph, of the General Regulations of USP.

Candidates who obtain a minimum score of seven from the majority of the members of the judging committee will be considered qualified for the 2nd stage;

Only candidates approved in the first stage will participate in the second stage.

II - Second stage: PUBLIC ARGUMENTATION EXAM AND EVALUATION OF THE MEMORIAL AND DIDACTIC EXAM

JUDGMENT OF THE MEMORIAL

The judgment of the Memorial, expressed by a global grade, including judgment and evaluation, shall reflect the merits of the candidate.

During the analysis of the Memorial, the commission shall appreciate:

- I - scientific, literary, philosophical, or artistic production;
- II - university didactic activity;
- III - activities related to the provision of services to the community;
- IV - professional or other activities, when applicable;
- V - diplomas and other university dignitaries.

DIDACTIC EXAM

The didactic exam will be public, with a minimum duration of forty and a maximum of sixty minutes, and will deal with the program of the aforementioned area of knowledge, under the terms of article 137 of the General Regulations of USP.

JUDGMENT OF THE 2nd STAGE

At the end of the assessment of the exams, each candidate will receive a final score from each examiner, which will be the weighted average of the grades awarded by her/him in both phases.

The exam scores may vary from zero to ten, with an approximation to the first decimal place. The result of the selection process will be proclaimed by the judging commission immediately after its conclusion, in a public session.

Candidates who obtain a minimum final grade of seven from the majority of examiners will be considered qualified.

The nomination of candidates will be made by an examiner, according to the grades given by him/her.

The candidate who obtains the highest number of nominations from the judging committee will be proposed for appointment.

The tenure of the nominated candidate will be subject to approval in a medical examination carried out by the Department of Medical Expertise of the State – DPME, according to Article 47, VI, of Law No. 10,261/68.

The selection process will be valid immediately, and only the candidate nominated for the post in the selection process will be proposed for appointment.

The candidate will be called to assume the position by an official publication in the Official Gazette of the State (Diário Oficial do Estado).

4. Further information, as well as the rules relevant to the selection process, are available to those interested in the Academic Technical Assistance of the Institute of Geosciences of the University of São Paulo, at Rua do Lago, 562 - sala 306 - Butantã, São Paulo – SP, email: atacigc@usp.br.