Scholarship Application Letter - Petroleum Engineer

# SCHOLARSHIP APPLICATION LETTER

For the Master of Science in Petroleum Engineering Program

October 26, 2023

Dr. Ana Silva  
Director, Scholarships Committee  
University of Brasília (UnB)  
Brasília - DF, Brazil

Subject: Formal Application for Petroleum Engineering Scholarship at University of Brasília

Dear Dr. Silva and Esteemed Scholarship Committee,

It is with profound enthusiasm and deep respect for Brazil's leadership in energy innovation that I submit this Scholarship Application Letter to pursue advanced studies in Petroleum Engineering at the University of Brasília (UnB). As a dedicated student deeply committed to contributing to Brazil's energy future, I believe that Brasília—the heart of our nation's governance and strategic planning—provides the ideal academic environment where my aspirations as a future Petroleum Engineer can be cultivated through world-class research and industry collaboration.

My academic journey began at Federal University of Rio de Janeiro (UFRJ), where I earned my Bachelor's degree in Mechanical Engineering with honors (GPA: 3.8/4.0). During my studies, I developed a specialized focus on reservoir engineering through independent research on enhanced oil recovery techniques in offshore Brazilian fields. This project, conducted under the mentorship of Professor Carlos Mendes of PETROBRAS Research Center, ignited my passion for sustainable petroleum extraction—a field where Brazil stands as a global pioneer. Witnessing the transformative impact of our nation's deepwater pre-salt discoveries firsthand while interning at Petrobras' Rio de Janeiro headquarters solidified my resolve to become a Petroleum Engineer capable of driving technical innovation within Brazil's energy landscape.

My decision to pursue graduate studies in Brasília is not merely geographical but strategic. As the political and administrative capital of Brazil, Brasília serves as the epicenter for national energy policy formulation and regulatory frameworks. The University of Brasília's School of Engineering—particularly its Center for Petroleum Studies (CENPET)—offers unparalleled access to policymakers, industry leaders from Petrobras, Shell Brazil, and TotalEnergies, and cutting-edge simulation facilities that directly align with my research interests in optimizing hydrocarbon recovery while minimizing environmental impact. This unique ecosystem in Brazil Brasília provides the contextual understanding essential for a Petroleum Engineer operating within our nation's complex regulatory and geological environment.

My proposed research focuses on "Intelligent Well Completion Systems for Mature Fields in Brazil's Pre-Salt Basin," a critical initiative addressing the nation's need to extend field productivity while adhering to increasingly stringent environmental standards. This project directly supports the Brazilian government's energy transition strategy, which seeks to balance fossil fuel production with sustainable practices—a vision I aim to advance through my scholarship-supported research. Brasília’s position as a hub for national energy policy makes it indispensable for developing solutions that bridge technical execution and regulatory compliance, a perspective no other academic setting could provide.

I have meticulously prepared this Scholarship Application Letter not only to demonstrate academic merit but also to articulate how my trajectory aligns with Brazil's energy priorities. My master's thesis on "AI-Driven Reservoir Management" earned recognition at the 2023 Brazilian Society of Petroleum Engineering (SPE) Conference in São Paulo, where I presented alongside industry leaders who confirmed the urgent need for data-driven approaches in our national fields. This work positioned me to contribute immediately to UnB's ongoing partnerships with Petrobras' Cenpes laboratory—a collaboration that places Brasília at the forefront of petroleum engineering R&D across Latin America.

Financial considerations necessitate scholarship support, as my family's resources cannot sustain international graduate education costs. My parents, both public school teachers in Belo Horizonte, have sacrificed significantly to fund my undergraduate studies. This scholarship would alleviate economic barriers while enabling me to fully dedicate myself to research critical for Brazil's energy sovereignty. I am particularly drawn to the UnB Scholarship Program for its emphasis on "Engineering Solutions for National Development," a philosophy that mirrors my belief that Petroleum Engineers must serve as stewards of our nation's hydrocarbon resources with both technical excellence and social responsibility.

As a future Petroleum Engineer, I recognize Brazil's unique position in global energy markets. With the country producing over 3.5 million barrels per day from the pre-salt fields—a testament to engineering prowess—our next frontier requires innovative solutions for aging infrastructure and carbon reduction. Brasília’s academic environment allows me to work directly with federal agencies like ANP (National Agency of Petroleum) and MME (Ministry of Mines and Energy), ensuring my research addresses real policy needs. This integration of academia, government, and industry is what makes Brazil Brasília the indispensable location for my graduate studies.

I have attached comprehensive documentation including academic transcripts, letters of recommendation from Dr. Mendes (PETROBRAS) and Professor Elisa Costa (UFRJ), a detailed research proposal aligned with UnB's strategic goals, and proof of family financial circumstances. I respectfully request the opportunity to discuss how my background as an emerging Petroleum Engineer can contribute to UnB's mission while advancing Brazil's energy leadership through the scholarship program.

My commitment extends beyond academic achievement; it embodies a promise to apply knowledge gained in Brasília toward developing technologies that safeguard Brazil's hydrocarbon legacy for future generations. I am eager to join UnB’s community of scholars and contribute to the nation's energy narrative from the very heart of Brazilian governance. Thank you for considering this Scholarship Application Letter and my candidacy as a potential Petroleum Engineer committed to serving Brazil with excellence.

With sincere gratitude and anticipation,

**Lucas Mendes Pereira**

Undergraduate Researcher, University of Rio de Janeiro (UFRJ)

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**Attachments:** Academic Transcripts | Research Proposal (Pre-Salt Field Optimization) | Letters of Recommendation (2) | Financial Documentation

This Scholarship Application Letter constitutes an official document for the Master of Science in Petroleum Engineering program at University of Brasília (UnB), Brazil. All content is original and submitted in English per institutional requirements.