

Study Plan for Bachelor's Degree in Petroleum Engineering

Introduction

I am Umar Ahmad Adam, an aspiring student aiming to pursue a Bachelor's Degree in Petroleum Engineering, commencing in September 2025. My objective is to gain a robust and comprehensive education in Computer Science and Technology, which will equip me with the necessary skills and knowledge to make significant contributions to my home country, Nigeria, after graduation.

Background

Born Kano State and raised in Kano State, Nigeria, I graduated from Abu hanifa Academy 2021 with an excellent academic record and a strong interest in petroleum engineering. My high school education provided me with a solid foundation in engineering principles and sparked my passion for a career in engineering. The satisfaction I derived from studying Engineering subjects motivated me to pursue higher education in this dynamic field.

Why Study in China?

China has established itself as a global leader in Engineering science and technology, making it an ideal destination for studying petroleum engineering. The country's rapid economic growth and development offer a dynamic environment for learning and experiencing engineering practices firsthand. Additionally, China's cultural diversity and rich history provide a unique perspective on global engineering strategies and operations. Studying in China will give me the opportunity to interact with top professionals in petroleum engineering, participate in cutting-edge engineering research, and gain valuable insights into the global petroleum landscape.

Detailed Study Plan

First Year (2025-2026)

Semester 1 (September 2025 - January 2026)

- **Petroleum exploration:** Learn how to search for underground oil and gas deposits.
- **Drilling technology:** Encompasses techniques and tools for creating holes in various materials.
- **Formation evaluation & well logging:** Involves using various techniques to analyze the characteristics of subsurface geological formations.
- **Chinese Language and Culture I:** Begin learning the Chinese language and gain an understanding of Chinese culture.

Semester 2 (February 2026 - June 2026)

- **Advanced drilling engineering:** Encompasses specialized techniques and technology for drilling wells including unconventional methods.
- **Seismic technology:** Uses sound waves to create image of the subsurface.
- **Reservoir Engineering:** A specialized field within petroleum engineering that focuses on the efficient and economic management of oil and gas.
- **HSE & Hazard Concern In Petroleum Industry:** Exposure to hazardous chemicals, extreme temperatures, and physical injuries.
- **Chinese Language and Culture II:** Continue developing language skills and deepen cultural understanding.

Second Year (2026-2027)

Semester 3 (September 2026 - January 2027)

- **Reservoir surveillance and management:** monitoring and managing oil and gas reservoirs to optimize hydrocarbon recovery and maximize profitability.
- **Production Technology :** encompasses the method equipment and used to transform inputs into outputs (goods or services) efficiently.
- **Seminar and viva voce is a form of instruction involving small group discussions**
- **Intermediate Chinese Language I:** Advance language proficiency and cultural understanding.

Semester 4 (February 2027 - June 2027)

- **Reservoir Engineering Practical:** applies engineering principles evaluate and manage oil and gas reservoirs.
- **Well Design practical:** is the features that are considered when planning and construction a well.
- **Unconventional Oil & Gas Resources:** Refer to hydrocarbon (oil&gas) that require advance extraction techniques, such as hydraulic fracturing and horizontal drilling, due to their low permeability and unconventional geological settings.
- **Production Technology:** encompasses the method processes and techniques used to transform inputs (like labor, capital and materials) into outputs (goods or services) efficiently.
- **Intermediate Chinese Language II:** Further enhance language skills and cultural knowledge.

Third Year (2027-2028)

Semester 5 (September 2027 - January 2028)

- **Business Ethics & Organizational Behaviour:** ethical principles and standards guide how organizations and individuals within them act, impacting decision-making, relationships, and overall performance.
- **Petroleum lab testing:** analyzing crude oil, fuels, and other petroleum products to ensure quality, safety, and compliance with standards, encompassing physical and chemical properties, composition, and contaminant detection.

- **Elective 1: Well Control** : the techniques and procedures used to maintain a stable and safe wellbore preventing uncontrolled releases of fluids during drilling.
- **Elective 2: Deep water technology**: Encompasses the specialized equipment techniques and processes used extract oil gas from beneath the ocean floor at depths exceeding.
- **\Chinese Business Culture and Practices**: Gain insights into business practices in China.

Semester 6 (February 2028 - June 2028)

- **Drilling and completion fluids, design & analysis**: Design to control subsurface pressures, remove cuttings, and facilitate well completion, with analysis ensuring optimal performance and minimizing risk.
- **Well Stimulation & Well services**: Treatments and maintenance procedures to enhance well productivity and maintain production.
- **Enhanced oil Recovery methods**: Chemical injection, thermal methods, and gas injection.
- **Natural Gas Engineering**: encompasses the entire lifecycle of natural gas, from exploration and extraction to transportation, processing, and distribution, with a focus on optimizing efficiency, safety, and resource utilization.
- **Mini project & viva voce**: typically refers to a small, focused project culminating in an oral examination (or "viva voce") to assess understanding and skills.

Fourth Year (2028-2029)

Semester 7 (September 2028 - January 2029)

- **Seminar & viva voce**: a seminar is small focused group meeting for discussion or instruction while a viva voce (or viva) is an oral examination defense of a thesis or research work.

Project I (Research Proposal and Literature Review): Develop a research proposal and conduct a literature review

Semester 8 (February 2029 - June 2029)

- **Drilling fluids and cementing lab**: provides hands on training to determine the rheological and filtration properties of drilling fluids and cement slurries.
- **Elective 7: Web Technology-2**: Encompasses the tools, protocols and languages used to create web applications.
- **Elective 8: Project Management**: Learn about project planning, execution, and control.
- **Capstone Project II (Research Findings and Presentation)**: Present research findings and conclusions.
- **Comprehensive Exam Preparation**: Prepare for the final comprehensive exams.

Conclusion

Studying in China will provide me with a world-class education in Petroleum engineering, equipping me with the skills and knowledge necessary to excel in the engineering world. I am enthusiastic about the opportunity to learn from esteemed faculty and gain valuable experience in China's dynamic technology environment. I look forward to contributing to and benefiting from the vibrant academic community.

Thank you for considering my application.

Sincerely,
UMAR AHMAD ADAM