**Overview of the Program – Petroleum Engineering**

Petroleum Engineering is a specialized engineering discipline focused on the exploration, production, refinement, and distribution of hydrocarbons, including crude oil and natural gas. This highly technical field intersects with several related areas such as geophysics, petroleum geology, formation evaluation (well logging), drilling, economics, reservoir simulation, well engineering, artificial lift systems, and oil and gas facilities engineering. In Egypt, petroleum engineering education is offered by only a few universities, with Future University being one of the select institutions providing this specialized program.

Future University’s petroleum engineering graduates’ benefit from instruction by leading researchers and industry professionals with over 35 years of experience. The program’s curriculum is designed to bridge classroom learning with practical industry applications, ensuring that undergraduates gain the hands-on knowledge and skills necessary to actively contribute to the petroleum sector both within Egypt and internationally. As part of our commitment to continuous improvement, the curriculum has recently been updated to include courses aligned with the United Nations Sustainable Development Goals (SDGs), supporting the industry’s efforts to address climate change challenges. The Petroleum Engineering Department holds accreditation from the Ministry of Higher Education and Missouri University of Science and Technology (S&T). Through a faculty and student exchange program with Missouri S&T, undergraduate students have the opportunity to study abroad, enhancing their intellectual development and expanding their global professional network.



To ensure our graduates enter the oil and gas industry as productive contributors capable of working across all sectors—including operators and service providers worldwide—the department has established numerous collaboration agreements with national and international companies and institutions such as the Egyptian Petroleum Research Institute (EPRI), Streamlines Oil & Gas, Tatweer Petroleum Services, and SLB (formerly Schlumberger). These partnerships provide valuable opportunities for students to gain internships, practical training, and field experience prior to graduation, while also facilitating access to full-time employment opportunities for our graduates.



As part of the program requirements, students must complete an internship with a recognized Exploration and Production (E&P) company as part of their industrial training during the summer of their third and fourth years. This hands-on experience exposes students to real-world professional environments, helping them stay current with the latest technological developments and industry standards—knowledge that is directly integrated into their advanced coursework. Additionally, students are encouraged to participate in national and international conferences by presenting research papers, with full support and sponsorship provided by Future University in Egypt (FUE), whether the events are held locally or abroad.

Success in the petroleum engineering program requires a combination of technical, personal, and professional qualities. Strong analytical skills are essential for interpreting complex data and solving engineering problems, while proficiency in mathematics, physics, and chemistry provides the foundation for understanding core concepts. A natural problem-solving aptitude, attention to detail, and adaptability are critical in addressing the challenges of a dynamic industry. Effective communication skills are also important for working with multidisciplinary teams and conveying technical information to various stakeholders. Additionally, ethical awareness and a strong sense of environmental responsibility are increasingly vital in today’s energy landscape. Resilience, curiosity, and a collaborative mindset further contribute to thriving in both academic and professional environments. Together, these attributes—paired with a solid educational background—equip students for a successful journey in petroleum engineering and a rewarding career in the industry.