

## Bachelor's Degree Program in Occupational Safety Engineering

### • Executive Summary

The Bachelor of Occupational Safety Engineering at Fahad Bin Sultan University (FBSU) is a comprehensive undergraduate program designed to develop skilled professionals capable of promoting and maintaining health and safety in a wide range of industrial and workplace settings. The program provides a rigorous foundation in engineering principles, hazard identification, risk assessment, safety systems design, and emergency preparedness, while aligning with Saudi Vision 2030 goals and national workforce development needs.

The curriculum consists of 159 credit hours, blending theoretical instruction with practical laboratory work, field training, and two capstone projects. Students are trained to design and implement effective safety protocols, conduct technical evaluations, and ensure compliance with local and international regulations (e.g., OSHA, NFPA, ISO 45001).

Anchored in values of ethical responsibility, professional conduct, and lifelong learning, the program emphasizes technical proficiency in fire protection, industrial hygiene, and safety in mechanical and electrical systems, ergonomics, and environmental health. Graduates acquire leadership and communication skills necessary to work effectively in multidisciplinary teams and to drive a culture of safety and innovation in their future workplaces.

Career opportunities span both the public and private sectors, including roles in:

- Health and Safety Engineering
- Risk Assessment and Compliance
- Industrial and Construction Safety
- Fire Safety Engineering
- Environmental Health and Safety (EHS)
- Emergency Response Coordination

Target employers include leading national and regional organizations such as Saudi Aramco, SABIC, Saudi Electricity Company, NEOM, Red Sea Global, and various ministries and regulatory agencies.

Graduates are well-prepared for certification and professional growth in the safety field. The program supports national goals by ensuring a pipeline of engineers equipped to tackle modern workplace hazards and improve safety culture in fast-growing industries.

In summary, the Occupational Safety Engineering Program at FBSU is a forward-looking, mission-aligned program that equips students with the technical expertise, ethical framework, and leadership skills required to safeguard human health, protect the environment, and support sustainable industrial development in the Kingdom of Saudi Arabia and beyond.