Badge II: Offshore Power
UH Faculty Modules

2B) Power Systems for Platforms, Subsea, and Wells

Key Priorities

- Introduction to power generation, distribution, and consumption in offshore platforms, subsea systems, and wells.
- Learn about the unique challenges of power systems in harsh environments, including reliability and fault tolerance.
- Study the role of transformers, switchgear, and protection systems in offshore and subsea power networks.
- Examine the impact of renewable integration and energy storage with subsea loads in offshore power systems.

Key Learnings

- Gaining a fundamental understanding of power system design considerations for offshore and subsea applications.
- Understanding the impact of environment on electrical equipment performance.
- Developing preliminary skills to model and simulate offshore power systems for stability and efficiency.

2E) Offshore Power and Renewables

Key Priorities

- Introduction to the various types of offshore renewable energy sources
- Offshore wind power generation and calculation of the amount of power generation.
- Operation of the Key functional components of the offshore wind energy system.
- Architectures for transmission offshore power to the onshore grid and for offshore applications such as subsea, hydrogen generation, etc.

Key Learnings

- Overview of generation and utilization of electric power in offshore installations and for onshore
- Understanding the operation of offshore wind energy system
- Understanding the architectures for using the wind energy for transmission and connecting to onshore grid.