

# TWO YEAR POST GRADUATE PROGRAMME IN SUSTAINABLE ENERGY MANAGEMENT

## Introduction

Energy is in high demand today and there is an acute shortage of energy to meet human needs. In response, countries are moving towards carbon-zero targets by exploiting a plethora of sustainable energy sources. There are many sustainable sources including solar, hydro, wind, geothermal and wave energy amongst other sources that are available to address the energy crisis. However, deficiencies in technology deployment and skilled workforce manifest as primary bottlenecks for tapping the sustainable energy sources. Energy management involves monitoring, controlling, and conserving energy in various stages of the projects (i.e., planning, construction, generation, transmission and distribution (GT&D), and operations and maintenance (O&M)). Energy management fields include, but are not limited to carbon capture and storage, wind energy, bio-energy, solar energy, hydropower, geothermal energy, and conventional fuels, along with system analysis, environmental issues, energy harvesting, and built environment design. Energy management is one of the key areas that receives significant attention by government and public. In this context NICMAR has responded proactively to the need of the hour and has taken a lead in offering a Two Year Post Graduate Programme in Sustainable Energy Management (SEM) from 2023.

## Objectives

Being an industry-oriented programme, Energy Management equips graduates to become professional energy auditors, energy managers, energy monitoring professionals to work with energy production and distribution companies, consultants and government departments. Post graduates of this programme will have competency,

- to achieve and maintain optimum energy procurement and utilisation
- to minimize energy costs / waste without affecting production & quality
- to minimize environmental effects
- to optimize use of sustainable resources like solar, wind energy etc.
- to make professionals to optimise energy resources
- to promote the sustainable energy sector.

## Programme Highlights

This programme is a specially designed with a blend of energy and sustainability. It is spread over four semesters. The scope of energy management includes but not limited to sectors such as energy source exploration, throughput management, power generation, transmission, distribution, and consumers such as agriculture, industries, services, residences and mobility. This diverse scope of energy management epitomizes the interdisciplinary nature of the professional skill set required for this role. In consequence, an increase in the skill gap in energy management is also expected, which significantly affects the transitional developments in the energy sector. Energy management professionals play a pivotal role in the project delivery, operations and maintenance and require a blend of technical, economics, financial and management skills. The programme combines theory with practical lab sessions that are carefully designed to ensure the balance between concepts and practical training in sustainable energy.

## Duration and Organisation

The programme duration is of two years and is organised into four semesters. The first-year courses provide basic and fundamental knowledge in core areas such as energy overview, reforms, economics, various energy projects, natural and energy resources, financial, accounting, energy management, managerial communications, and summer internship. The six weeks internship provides a better synergy between theory and practice. In the second year, students have opportunities to select various elective courses as per their interest in learning advanced topics in the energy domain. These courses help the learners to acquire knowledge in some of the advanced and latest technologies and practices in the energy sector. Additionally, every student will have an opportunity to carry out a project related to the energy domain.

## Eligibility

Regular bachelor's degree in Engineering in any discipline with minimum 50% aggregate marks from recognised Institution / University. Industry sponsored candidates with the above criteria are also eligible.