



Event Location:

MARIGENOME, 4TH FLOOR,
DOOR NO: 51/2888B, 51/2888C PALAKATS,
THYKODAM ERNAKULAM, KERALA

CONTACT: +91 81388 04659

PhyEc  **SyS** the
algal
remediators

PHYECOSYS, ERNAKULAM - 682041
KERALA, INDIA

PhyEc  **SyS** the
algal
remediators

5-DAY CERTIFIED HANDS-ON WORKSHOP ON ALGAL BIOTECHNOLOGY & MOLECULAR TOOLS

EMPOWERING FUTURE INNOVATORS
IN SUSTAINABLE BIOTECHNOLOGY

Venue: Marigenome

 **MARIGENOME**
GROWING SCIENTIFIC CULTURE

WHO IS PHYECOSYS?

Phyecosys, a pioneering algal startup based in Kochi, Kerala, India, is passionately dedicated to forging sustainable solutions through the versatile power of algae. From the promise of clean energy to the critical work of ecological restoration, algae serve as both the inspiration and the core mission of the organization. Driven by a profound dream, the company is committed to transforming our world into a greener and more resilient future, tapping into the unique capabilities of algae to address pressing environmental challenges.

WHO IS MARIGENOME?

Marigenome is a pioneering organization in Kochi dedicated to advancing research and innovation in molecular biology, microbiology, and allied life sciences. They offer a comprehensive suite of services for students, researchers, academic institutions, and industries, bridging the gap between theory and practice to help clients achieve their scientific goals.

DAY 1: ALGAL BIOTECHNOLOGY & CULTIVATION TECHNIQUES

- Introduction to microalgae & macroalgae: structure, taxonomy & applications
- Culture media preparation and inoculation practices
- Exposure to various cultivation systems

DAY 2: GROWTH ANALYSIS & BIOMASS HARVESTING

- Learn algal growth dynamics, productivity assessment & harvesting strategies
- Practice optical density, dry weight estimation, and biomass collection methods
- Understand factors influencing nutrient retention and biomass yield



DAY 3: ALGAL BIOPRODUCTS & SUSTAINABILITY APPLICATIONS

- Insights into algal bio-actives: pigments, lipids, biofuels, fertilizers & proteins
- Explore algae's role in wastewater treatment & CO₂ sequestration
- Discussion on algae's integration into circular bio-economy models

DAY 4: GENOMIC DNA EXTRACTION FROM ALGAL & PLANT SOURCES

- Basics of molecular biology and its relevance to algal research
- Perform genomic DNA extraction and quality analysis
- Learn labeling, preservation, and storage techniques for molecular workflows

DAY 5: PCR AMPLIFICATION & DNA-BASED SPECIES IDENTIFICATION

- Fundamentals of PCR, primer design, and thermocycling
- Gel electrophoresis for DNA visualization
- Sequence analysis using FASTA and NCBI BLAST for species identification

PROGRAM HIGHLIGHTS

- ✓ Expert-guided hands-on training every day
- ✓ Engaging mini-sessions to reinforce practical learning
- ✓ Covers algal biotechnology + molecular biology in one compact module
- ✓ Focus on industrial relevance, sustainability & innovation
- ✓ Ideal for students, researchers, entrepreneurs & bio-enthusiasts
- ✓ Certificate of Internship

