

SHIP DESIGNER CAPABILITY DEVELOPMENT & CERTIFICATION PROGRAM

COURSE OBJECTIVES

- To enable participants to understand modern ship design principles, classification rules and IMO requirements
- To develop competency in ship hull, machinery and electrical ship design concepts and applications
- To familiarize participants with digital ship design tools, environmental compliance and future maritime technologies
- To strengthen capability in applying international standards, sustainability concepts and safety considerations during ship design and construction.

ABOUT THE COURSE

This course offers comprehensive knowledge and familiarization with modern ship design and engineering practices, focusing on classification requirements, digital design methodologies, environmental regulations, future fuels, risk assessment and specialized design streams. Participants will gain insight into practical ship design applications, industry expectations and emerging maritime technologies.

PARTICIPANTS

Naval Architects, Marine Engineers, Electrical Engineers, Ship Designers & Maritime Professionals

DURATION

5 weeks (For Hull & Machinery Designers) / 4 weeks for Electrical Designers

MODE OF TRAINING

Classroom

TOPICS COVERED

- Introduction to Ship Design & Classification Rules
- Hull Structure Design & Stability Concepts
- Marine Machinery & Propulsion Systems
- Marine Electrical Systems & Automation
- Digital Ship Design & CAD Applications
- Environmental Compliance & Future Fuels
- Risk Assessment & Safety Engineering
- Practical Design Case Studies & Workshops

KEY TAKEAWAYS

- Developing the young structural, mechanical & electrical engineers into professional ship designers
- Enhancement of understanding of structural design and skills/ tools to verify using dedicated software
- Improved understanding of integrated Hull, Machinery and Electrical design interfaces in modern shipbuilding projects
- Enhanced capability to interpret and apply Classification Society rules and IMO regulatory requirements during design reviews
- Practical exposure to digital ship design workflows, CAD-based engineering concepts and multidisciplinary coordination
- Better understanding of sustainability initiatives, decarbonization strategies and future marine fuel implications on ship design
- Exposure to real-world maritime case studies and industry best practices applicable to shipyards, consultancies and marine organizations
- Strengthen competency in technical documentation, design verification and engineering compliance processes.