# UNIVERSITI TEKNOLOGI MARA

# Structure Design and Analysis of Small-Scale Multi-Purpose Terengganu Fishing Boat

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Dissertation submitted in partial fulfilment of the requirement of the degree of **Diploma in Mechanical Engineering**

**College of Engineering**

**October 2024 - February 2025**

# ABSTRACT

The fishing industry in Terengganu, Malaysia, is central to the region's economy and cultural heritage. Small-scale fishing boats are crucial for local fishermen but evolving needs demand versatile and efficient vessels. This project focuses on the structural design and analysis of a small-scale multi-purpose Terengganu fishing boat, addressing the challenge of optimizing hull thickness and framing system dimensions. The methodology includes data collection, literature review, hull design using POLYCAD software, general arrangement, weight estimation, structure and framing system design, and strength analysis. The expected results include a comprehensive analysis of the ship's weight, buoyancy force, load distribution, shear force, bending moment, and factor of safety, ensuring the vessel's stability and compliance with safety standards. The project aims to deliver a robust structural design that enhances operational efficiency and sustainability, revitalizing the local fishing industry and improving fishermen's livelihoods in Terengganu.

# ACKNOWLEDGEMENT

First and foremost, I am deeply grateful to God for granting me the strength, guidance, and perseverance to embark on and complete this challenging journey of my diploma studies. Without His blessings, this achievement would not have been possible.

I would like to express my heartfelt gratitude to my supervisor, Ts. DR. Nik Khairuddin Bin Nik Ismail, for his invaluable guidance, continuous support, and constructive feedback throughout this project. His expertise and encouragement have been instrumental in helping me navigate the complexities of this work.

I extend my appreciation to my friends and project teammates, whose collaboration, ideas, and unwavering support have been essential in completing this project. Although each of us had our individual responsibilities, their insights and encouragement inspired me to push forward.

Finally, this thesis is lovingly dedicated to my beloved parents, whose unwavering belief in my potential and relentless support have been the backbone of my success. Their tough yet motivating words and sacrifices have been a source of strength throughout my academic journey. A part of this achievement belongs to them.

Alhamdulillah.

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