



Davao del Sur State College
Brgy. Matti, Digos City, Davao del Sur

LABORATORY MANUAL

ABE 613:

AQUACULTURE

ENGINEERING FOR ABE





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FOR ABE



Author:
Teresa S. Lumansoc, ABE, MS

**Bachelor of Science in Agricultural and Biosystems
Engineering Department
Davao del Sur State College
Matti, Digos City, Davao del Sur**

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PREFACE

The laboratory activities presented in this manual follow the aquaculture engineering exercises outlined in CMO No. 94, Series of 2017, for the BSABE program. This manual serves as a practical guide to help students learn through experience in designing, operating, and evaluating aquaculture systems, thus enhancing their technical skills by combining engineering principles with real-world applications in aquatic production systems.

This manual starts with an introduction to important topics in aquaculture engineering. It covers the basic principles of water quality management, aquaculture system design, and system performance. Through selected laboratory activities, students learn about the basic operation and the specific functions of the components of an aquaculture system, such as tanks, pumps, and aeration devices that help maintain suitable conditions for aquatic organisms.

To support laboratory learning, this manual includes a field visit providing students with hands-on experience in actual aquaculture environments. This opportunity allows students to observe routine operations, understand facility layouts, and learn about local aquaculture and fish farming practices.

Through guided laboratory activities, design exercises, and field-based experiences, this manual will enhance students' analytical thinking, problem-solving ability, and professional skills needed for sustainable and effective aquaculture engineering practice.

Disclaimer Statement:

*This laboratory manual is made **for educational use only**. The author has made every effort to acknowledge the sources and references used in the preparation of this manual; however, some citations may have been **unintentionally** omitted. Users of this manual are encouraged to seek additional resources for further study.*

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