

PROJECT DETAILS FOR FINAL SUBMISSION

Project Title: Elevated Ecosystems: Algae-Based Residential Tower

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Student's Full Name: Vanfasai Jaijong

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Instructor's Full Name: Chutayaves Sinthuphan

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Course:

Architectural Design 2

Studio Brief Title:

Urban Incubators

Short Project Description (100 words max.):

This project envisions a 105-meter-tall residential tower with a central core designed to elevate platforms during severe flooding, addressing the impacts of rising sea levels. Integrating algae-based systems, the tower provides clean air, sustainable resources, and community engagement through modular living pods and communal spaces. The parametric algae facade enhances aesthetics, filters CO₂, and generates products like fertilizer and biofuel. Rooftop gardens and algae ponds encourage resident participation, fostering a self-sufficient and adaptive community. Balancing sustainability and urban resilience, the tower blends innovation and environmental integration, offering a future-ready housing model for flood-prone, dense urban areas.