



FATIMAH NUR ZAHRANI

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Chemical Engineering at Diponegoro University undergraduate with practical experience in process optimization and energy balance analysis from an internship at PT Wilmar Nabati Indonesia. Demonstrates strong technical foundation in unit operations and safety management through roles as a Laboratory Assistant. Combines technical skills in Aspen HYSYS and SciLab with proven organizational and financial management capabilities to drive operational excellence.

EDUCATION

Diponegoro University Bachelor of Engineering in Chemical Engineering (IPK 3.59/4.00)	(2022 – 2026)
SMAN 4 Tangerang	(2019-2022)

WORK EXPERIENCE

Laboratory Assistant Unit Operation Laboratory Diponegoro University	(2025 - 2026)
- Mentored and supervised students in executing complex unit operation experiments, focusing on heat transfer processes. - Ensured 100% equipment uptime by performing routine maintenance and troubleshooting on plate and frame filter presses. - Analyzed experimental data accuracy and provided comprehensive evaluations of students' technical reports. - Upheld rigorous safety standards, resulting in zero workplace incidents during supervised laboratory sessions.	
PT Wilmar Nabati Indonesia	(2025)
- Optimized operational efficiency by calculating and analyzing performance metrics of centrifugal pumps. - Supported process improvement initiatives by conducting comprehensive energy balance studies in cooling towers. - Acquired deep technical knowledge of CPKO (Crude Palm Kernel Oil) and pellet production processes through on-site observation and analysis.	

ORGANIZATIONAL EXPERIENCE

LPM Kinetics Wall Magazine & Bulletin Editor	(2024 – 2025)
HMTK Diponegoro University Staff of Career & Professional Development	(2023 – 2024)
LPM Kinetics Staff of Redaction	(2023-2024)
Creation Treasurer	(2023)
MPK Organization Treasurer	(2020-2021)

RESEARCH PROJECT

Optimization Of Glucose Production From Montong Durian Seeds (Durio Zibethius Murr.) Using Sulfuric Acid Hydrolysis Process With Rsm For Bioethanol Production	(2024 – 2025)
- Biomass Conversion: Developed a process to convert durian seed waste into glucose through physical-chemical pretreatment and acid hydrolysis stages. - Analytical Laboratory Testing: Conducted comprehensive lab characterization to evaluate moisture, ash, protein, amylose, amylopectin, and UV-Vis glucose yields. - Statistical Optimization: Utilized Central Composite Design (CCD) to analyze variable interactions and establish the mathematical model for optimum operating conditions.	
Maximizing ethylene production yield by modifying the methanol to olefin process with the addition of a distillation tower	(2025)
- Process Simulation & Yield Optimization: Simulated and optimized the Methanol-to-Olefins (MTO) process using Aspen HYSYS - Separation System Modification: Redesigned the chemical purification sequence by integrating a distillation tower	

TRAINING AND SEMINAR

Measuring and Mitigating Exposure to Air Pollution Seminar HMTK Diponegoro University	(2023)
Leadership Training HMTK Diponegoro University	(2023)
Pre-Elementary Student Management Skills Training HMTK Diponegoro University	(2023)

AWARD

2nd Place Winner National Scientific Paper Competition (PHENOL), UNNES	(2025)
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SKILL

IT SKILLS	Microsoft Office (Word, Excel, PowerPoint, Visio), Aspen Hysys
LANGUAGES	Indonesian (aktif), English (pasif) Score Toefl by SEU (451)
PERSONAL	Combines strong data and financial analysis skills with a leadership-driven approach, exceptional communication, structured problem-solving, self-motivation, and a dedication to continuous learning