

ANNISA MIFHTANTI

CHEMICAL ENGINEERING GRADUATE

Process Engineering • Manufacturing • Production

South Jakarta • Indonesia | annisamifhtanti@gmail.com •
085820160846 • linkedin.com/in/annisa-mifhtanti-4062b7242



PROFILE

Chemical Engineering graduate with academic and industrial experience in process design, process analysis, material and energy balance, equipment design, process control, process safety, research, and problem solving. Experienced through an internship at PT Pertamina Hulu Rokan, technical development using Aspen HYSYS and Python, and leadership and technical communication activities.

CORE COMPETENCIES

- Process Design & Process Flow Diagram (PFD)
- Process Equipment Design & Specification
- Experimental & Data Analysis
- Aspen HYSYS & Python
- Material & Energy Balance
- Process Control & HAZOP Analysis
- Problem Solving & Technical Reporting
- Safety, Procedural Discipline & Teamwork

INDUSTRIAL EXPERIENCE

PT PERTAMINA HULU ROKAN

Industrial Internship | 3 October – 22 November 2022

- Gained exposure to oil & gas operations and industrial work practices.
- Observed engineering concepts in an industrial environment, including process equipment and phase equilibrium.
- Gained exposure to engineering problem solving through an industrial work-practice assignment.
- Followed company regulations, safety requirements, and operational discipline.
- Prepared a technical work-practice report reviewed by an industrial mentor and academic supervisor.

MAIN ENGINEERING PROJECTS

Methanol Plant Design — 135,000 tons/year

Methanol Plant Design from Carbon Dioxide (CO₂) and Hydrogen (H₂)

- Developed a continuous methanol production concept through carbon hydrogenation.
- Developed the Process Flow Diagram and process integration.
- Performed material and energy balances and process equipment design and specification.
- Developed a process control system and conducted safety analysis through Mini HAZOP.
- Considered utilities, waste management, and economic feasibility analysis.

Equipment Design — Distillation Column C-301

- Defined equipment dimensions based on process requirements.
- Considered operating data and process conditions in equipment specification.
- Documented equipment information in an engineering data sheet.

EDUCATION

INSTITUT TEKNOLOGI SUMATERA

B.Sc. in Chemical Engineering | Graduate

GPA : 3.35/4.00

RESEARCH & LABORATORY EXPERIENCE

- Research: Effect of Water and NaOH Solution Soaking Pretreatment on the Characteristics of Agarwood Powder Extract Obtained Using the Hydrodistillation Method.
- Practicum Assistant — Instructional Laboratory 2 | Odd Semester 2022/2023.
- Teaching Assistant — Chemical Engineering Basic 1 | Odd Semester 2020/2021

TECHNICAL DEVELOPMENT

- Aspen HYSYS Workshop — Participant, 23 June 2022.
- Python — Practice Exam 1: 41/42 (passed); Practice Exam 2: 35/42 (passed).
- Python Certification / Assessment — 16 February 2023.

LEADERSHIP & ORGANIZATIONS

- Head of Harmonization Division — Chemical Engineering Student Association, Institut Teknologi Sumatera | 2022–2023.
- Staff, Education & Professional Development — BKKMTKI Regional | 2020–2022.

TARGET ROLES

Process Engineer • Production Engineer • Manufacturing Engineer • Process Improvement • Engineering Staff • Finance



ITERA INSTITUT TEKNOLOGI SUMATERA

IJAZAH

Certificate

diberikan kepada • *is conferred upon*

ANNISA MIFHTANTI

lahir di • *born in* Jakarta, 30 November 2001

Nomor Induk Mahasiswa • *Student Identity Number* 119280055

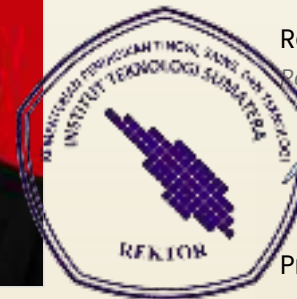
yang telah memenuhi seluruh persyaratan akademik dan administratif • *has successfully completed all academic*
untuk menyelesaikan pendidikan pada • *and administrative requirements of the*
program **SI TEKNIK KIMIA** • *Chemical Engineering Study Program*
pada tanggal • *on* 3 Juli 2026.

Sebagai pengakuan atas pencapaiannya, diberikan gelar • *In recognition of this achievement, the degree of*
Sarjana Teknik (S.T.) • *Bachelor of Engineering*
beserta segala hak, tanggung jawab, dan kehormatan • *is hereby conferred, with all the rights, privileges,*
yang melekat pada gelar tersebut. • *and obligations pertaining thereto.*

Diterbitkan pada tanggal • *Issued on* 10 Juli 2026.

Dekan Fakultas Teknologi Industri
Dean of the Faculty of Industrial Technology

Hadi Teguh Yudistira, S.T., Ph.D.



Rektor
Rector

Prof. Dr. apt. Elfahmi, S.Si., M.Si.





TRANSKRIP AKADEMIK · ACADEMIC TRANSCRIPT

Nomor : **TR/373/F3/TK.15/S-1/2026**

Identitas Mahasiswa · Student Identity

Nama · Name : ANNISA MIFHTANTI
NIM · Student Number : 119280055
Tempat & Tanggal Lahir · Place & Date of Birth : Jakarta, 30 November 2001
Tahun Masuk · Admission Year : 2019
Fakultas · Faculty : Fakultas Teknologi Industri
Faculty of Industrial Technology
Program Studi · Study Program : SI TEKNIK KIMIA
Chemical Engineering
Program Pendidikan · Degree : Sarjana
Bachelor

Capaian Pendidikan · Education Achievements

Jumlah SKS · Total Credits : 146
Indeks Prestasi Kumulatif (IPK) : 3.35
Grade Point Average (GPA)
Predikat · Predicate : Sangat Memuaskan · Very Good
Nomor Ijazah · Certificate Number : 002014242012026100055
Judul Tugas Akhir · Thesis Title : Pra Rancangan Pabrik Metanol dari Karbon Dioksida dan Hidrogen dengan Kapasitas 135.000 Ton/Tahun
PreDesign Methanol Plant from Carbon Dioxide and Hydrogen with a Capacity of 135,000 tons/year

Mata Kuliah · Courses

No	Kode Code	Nama Mata Kuliah Course	SKS Credit	Nilai Grade
1	FI1102	Fisika Dasar 1A · Fundamental of Physics 1A	4	BC
2	KI1103	Kimia Dasar 1A · Fundamental of Chemistry 1A	3	AB
3	KU1106	Pengantar Komputer dan Software I · Introduction to Computer and Software I	2	B
4	KU1002	Bahasa Inggris · English	2	B
5	KU1203	Pengenalan Lingkungan dan Potensi Sumatera · Introduction to Sumatera Environment and Potential	2	A
6	TK1101	Pengenalan Prodi Teknik Kimia · Introduction to Chemical Engineering	2	A
7	MA1103	Matematika Dasar 1A · Fundamental of Mathematics 1A	4	BC
8	FI1202	Fisika Dasar 2 · Fundamental of Physics 2	4	B
9	KU1001	Tata Tulis Karya Ilmiah · Writing Method for Scientific Research	2	B
10	KU1205	Pengenalan Komputer dan Software 2 · Introduction to Computer and Software 2	2	AB
11	MA1203	Matematika Dasar 2 · Fundamental of Mathematics 2	4	BC
12	KI1203	Kimia Dasar 2 · Fundamental of Chemistry 2	3	A
13	BI1103	Biologi Dasar 1B · Fundamental of Biology 1B	2	A
14	TK2104	Termodinamika Dasar · Basic Thermodynamics	2	B
15	KU0011	Agama Islam · Islam Religion	2	B
16	TK2107	Kimia Organik · Organic Chemistry	3	AB
17	TK2105	Neraca Massa dan Energi · Material and Energy Balances	3	BC
18	TK2103	Statistika Teknik Kimia · Chemical Engineering Statistics	2	AB
19	TK2102	Analisis Matematika Teknik Kimia · Chemical Engineering Mathematical Analysis	3	B
20	TK2101	Metode Pengukuran dan Analisis · Analytical & Measurement Methods	3	B
21	TK2207	Termodinamika Teknik Kimia · Chemical Engineering Thermodynamics	3	BC
22	TK2201	Kinetika Reaksi dan Katalisis · Chemical Reaction Kinetics and Catalysis	3	B
23	TK2202	Perpindahan Panas · Heat Transfer	3	AB
24	TK2204	Metode Numerik dan Komputasi Proses · Numerical Methods and Process Computation	3	BC
25	TK2205	Proses Pemisahan · Separations Processes	3	B
26	TK2206	Kimia Fisik dan Koloid · Physical Chemistry and Colloids	3	BC

No	Kode Code	Nama Mata Kuliah Course	SKS Credit	Nilai Grade
27	TK3001	Laboratorium Instruksional Teknik Kimia I · <i>Chemical Engineering Instructional Laboratory I</i>	2	B
28	KU0002	Pendidikan Pancasila dan Kewarganegaraan · <i>Pancasila and Civic Education</i>	2	A
29	TK3101	Peristiwa Perpindahan · <i>Transport Phenomena</i>	3	B
30	TK4135	Teknologi Panas Bumi · <i>Geothermal Technology</i>	2	AB
31	TK3121	Biodegradable Plastik · <i>Biodegradable Plastics</i>	2	A
32	KU0005	Kuliah Kerja Nyata · <i>Community Service Program</i>	2	A
33	TK3002	Laboratorium Instruksional Teknik Kimia II · <i>Chemical Engineering Instructional Laboratory II</i>	2	A
34	TK3105	Pengendalian Proses · <i>Process Control</i>	2	A
35	TK3202	Peralatan Proses · <i>Process Equipment</i>	3	AB
36	TK3102	Teknik Reaktor · <i>Reactor Engineering</i>	3	A
37	TK3103	Perancangan dan Simulasi Proses Kimia · <i>Chemical Process Design and Simulation</i>	3	A
38	TK3221	Teknologi Minyak Atsiri · <i>Essential Oil Technology</i>	2	A
39	TK4221	Mikrobiologi Industri · <i>Industrial Microbiology</i>	2	AB
40	TK4101	Sistem Utilitas · <i>Utility Systems</i>	3	BC
41	TK3203	Pengelolaan Lingkungan Industri Kimia · <i>Chemical Industry Environmental Management</i>	3	A
42	TK3003	Proposal dan Metodologi Penelitian · <i>Proposal and Research Methodology</i>	2	A
43	TK3205	Optimasi dan Trouble Shooting · <i>Optimization and Trouble Shooting</i>	2	A
44	TK3104	Proses Industri Kimia · <i>Industrial Chemical Processes</i>	3	A
45	TK2203	Pengenalan Bioproses · <i>Introduction to Bioprocess</i>	2	A
46	TK3201	Bahan Kontruksi dan Korosi · <i>Engineering Materials and Corrosion</i>	2	AB
47	TK3106	Keselamatan Pabrik Kimia · <i>Chemical Plant Safety</i>	2	AB
48	TK4103	Manajemen dan Evaluasi Ekonomi Industri Kimia · <i>Chemical Industry Economics Evaluation & Management</i>	3	A
49	TK4102	Rekayasa Produk dan Energi Berkelanjutan · <i>Product Engineering and Sustainable Energy</i>	2	AB
50	TK4121	Hulirisasi dan Hilirisasi Gaharu · <i>Upstream and Downstream Development of Agarwood</i>	2	A
51	TK4201	Etika Profesi dan Kewirausahaan Teknik Kimia · <i>Professional Ethics and Chemical Engineering Entrepreneurship</i>	2	A
52	TK2106	Mekanika Fluida dan Partikel · <i>Fluid and Particle Mechanics</i>	3	B
53	TK4001	Penelitian · <i>Research</i>	3	A
54	TK4002	Kerja Praktek · <i>Industrial Internship</i>	2	AB
55	KU2007	Studium Generale · <i>Studium Generale</i>	2	AB
56	TK4003	Perancangan Pabrik Kimia · <i>Chemical Plant Design</i>	2	AB
57	TK25-40003	Tugas Akhir · <i>Final Project</i>	4	B

Sistem Penilaian · *Grading System*

Nilai Mutu Grade	Angka Mutu Grade Point	Kriteria Criteria
A	4.0	Sangat baik · <i>Excellent</i>
AB	3.5	Antara baik dengan sangat baik · <i>Between Good and Excellent</i>
B	3.0	Baik · <i>Good</i>
BC	2.5	Antara cukup dan baik · <i>Between Satisfactory and Good</i>
C	2.0	Cukup · <i>Satisfactory</i>
D	1.0	Hampir Cukup · <i>Poor</i>
E	0	Gagal · <i>Fail</i>

Lampung Selatan · *South Lampung*, 10 Juli 2026

Dean Fakultas Teknologi Industri

Dean of the Faculty of Industrial Technology



Hadji Teguh Yudistira, S.T., Ph.D.

NIP. 199009182019031012



Annisa Mifhtanti

has successfully completed the certification requirements for
Python

A handwritten signature in black ink, appearing to read 'G. A. Gates'.

Dr. Gary A. Gates
Managing Director
Pearson VUE

February 16, 2023

Date Awarded

rH2K-uS7Y

verify.certiport.com





**HIMPUNAN MAHASISWA TEKNIK KIMIA
(HIMATEMIA)**

FAKULTAS TEKNIK UNIVERSITAS LAMPUNG

Sekretariat : Lt. 3 Gedung 1, Fakultas Teknik Universitas Lampung
Jln. Prof. Dr. Soemantri Brojonegoro No. 1 Gedung Meneng, Bandar Lampung 35145
Telp (0812) 1138565 Email : himatemia.ft@gmail.com



SERTIFIKAT

NO: 053/C/P/HIMATEMIA/FT/UL/VI/2022

DIBERIKAN KEPADA

Annisa Mifhtanti

ATAS PERAN SERTANYA SEBAGAI

Peserta

DALAM ACARA

**Workshop Aspen Hysys
Yang Dilaksanakan Via Zoom Meeting
Pada 23 Juni 2022**

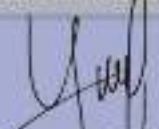
Ketua Jurusan Teknik Kimia

Ketua Himatemia FT Unila

Sekretaris Daerah I


Ahmad Fikri Alhadi

NIM. M1B118021


Yuli Darni, S.T., M.T.

NIP. 197407122000032001


Muhammad Syarif
NPM. 2015041059