



Our Partner:



About Pharmaceutical Chemical Engineering

Pharmaceutical Chemical Engineering is a concentration of the study program Chemical Engineering, with a focus on design, operation, and optimization of processes in pharmaceutical industries. You will learn both science and engineering. Not only the pharmaceutical chemistry, biology, and microbiology to formulate medicines, herbal medicines, or cosmetics, but also how to carry out the production process efficiently, material & energy balance, feasibility standards, plant design, and many more.

Career Prospect

The graduates will have career opportunities to work in national and multi-national pharmaceutical, chemical, herbal, cosmetics companies. Furthermore, they can also work in the pharmaceutical-related machines and instrumentations companies, either as manufacturers or suppliers. Moreover, they also have many opportunities to work as consultants, researchers, lecturers, and entrepreneurs.

International Academic Experience:

- Joint Degree Program with **Fachhochschule Südwestfalen** (approx. 6 months), get Sarjana Teknik (S.T.) and Bachelor of Engineering (B. Eng.) degrees.
- Joint Degree Program with **Hochschule Albstadt-Sigmaringen** (approx. 1 year), get Sarjana Teknik (S.T.) and Bachelor of Science (B.Sc.) degrees.
- Internship program to ensure students receive global professional experience.
- Accelerate Success with the **SGU-University of Missouri - Kansas City** Fast Track Program

Alumni of the Pharmaceutical Chemical Engineering Study Program have been accepted into top-tier firms, and the study program has established industry partnership, such as:



CURRICULUM

DOUBLE DEGREE
Academic Year 2024/2025

SEMESTER 1

English 1
Calculus and Linear Algebra 1
Physics 1
Physics 1 Laboratory
Chemistry 1
Chemistry 1 Laboratory
Introduction to Information Technology
Introduction to Electrical Engineering
Biology
Indonesian Language

Extracurricular Courses

German Language and Culture 1

SEMESTER 3

Internship 1 (Indonesia)
Good Manufacturing Practice (GMP) and Pharmaceutical Code
Material and Energy Balance
Analytical Instrumentation
Pharmaceutical Chemistry
Pharmaceutical Chemistry Laboratory
Applied Mathematics
Thermodynamics
Thermodynamics Laboratory
Fluid Mechanics
Engineering Economics and Analysis

SEMESTER 5

English 4
Reactor Engineering
Pharmaceutical Manufacturing
Technology
Pharmaceutical Manufacturing
Technology Laboratory
Phytochemistry
Herbal and Traditional Industry
Pharmaceutical Material &
Formulation
Process Equipment Design
Introduction to Chemical Process
Industries
Elective Subject 1
Elective Subject 1
Bioprocess Engineering
Production Planning Inventory Control
Materials Science
Extracurricular Courses
Supply Chain Management

SEMESTER 8

English 5
Plant Safety Operations
Research Methodology
Plant Design
Process Control
Critical Utility & Waste treatment
Pharmaceutical Product Development
Elective Subject 4
Elective Subjects
Pharmaceutical Industry Facility
Pharmaceutical Quality Control
System

SEMESTER 2

English 2
Calculus and Linear Algebra 2
Physics 2
Physics 2 Laboratory
Chemistry 2
Chemistry 2 Laboratory
Engineering Statistics
Introduction to Chemical Engineering
Microbiology
Entrepreneurship
Ethics and Religious Philosophy

Extracurricular Courses

German Language and Culture 2

SEMESTER 4

English 3
Pancasila and Civic
Unit Operations
Heat Transfer
Transport Phenomena
Physical Chemistry
Chemical Reactions and Kinetics
Numerical Methods
Separation Technology
Extracurricular Courses
German Language and Culture 3

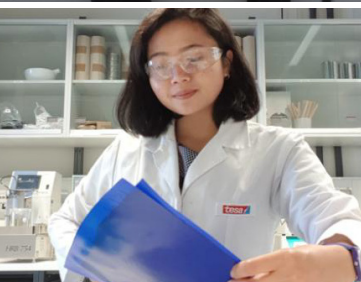
SEMESTER 6

Internship 2 (abroad) and Returnee Seminar
Elective Subject 2
Elective Subject 3

SEMESTER 8

Professional Competence Assessment (PCA)
Thesis
Character and Professional Development Program (CPDP)

INTERNSHIP EXPERIENCES



Contact Us:

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