220222535 Operational Unit

Module Name	**Operational Unit**
Module Level, if applicable	Intermediate
Code if Applicable	220222535
Subtitle, if applicable	-
Courses, if applicable	220222535 Operational Unit
Semester(s) in which the module is taught	3rd
Person responsible for the module	Dr. Ir. Warkoyo, MP.
Lecturer	Dr. Ir. Warkoyo, MP.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Departement of Food Technology, Faculty of Agriculture and Animal Science
Type of teaching	Lecture, project
Workload	● Lecture: 2 sks X 50 minutes X 16 weeks ● Project: 2 sks X 60 minutes X 16 weeks ● Independent learning: 2 sks X 60 minutes X 16 week
Credit points	2 SKS X 1.5 = 3 ECTS
Requirements according to the examination regulations	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	Mathematic II, Basic Physics
Module Objectives (Intended learning outcomes)	The essential concept is to divide physical food processes into basic unit operations, each of which stands alone and depends on coherent physical principles. For example, heat transfer is a unit operation and the fundamental physical principle underlying it is that heat energy will be transferred spontaneously.
Module Content	This course presents the principles of equilibrium, material and energy balances, liquid product transfer, evaporation, mechanical separation, distillation, and extrusion, as well as their application in the food industry.
Study and examination requirements and forms of examination	**Cognitive:** Midterm exam, Final exam, Quizzes, Assignments **Affective:** Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation

Recommended Literature	For Class
	    A. Compulsory
	
	1. Badger, W.L., And J.T. Banchero, 1985.
	    Introduction to Chemical Engineering.
	    Mc Graw Hill.

Date of Last Amendment	24th Agustus 2022