HASANUDDIN UNIVERSITY

Agricultural Engineering
Bachelor Program

2023
MODULE DESCRIPTION

BACHELOR PROGRAM
AGRICULTURAL ENGINEERING
FACULTY OF AGRICULTURE
HASANUDDIN UNIVERSITY
2023

Fluid Mechanics

Semester 3

Module designation	*Fluid Mechanics*
Semester(s) in which the module is taught	*III*
Person responsible for the module	• *Prof. Dr. Ir. Ahmad Munir, M.Eng* • *Dr. Ir. Mahmud Achmad, MP* • *Dr. Ir. Sitti Nur Faridah, MP* • *Dr. Suhardi, STP., MP*
Language	*Indonesia*
Relation to curriculum	*Compulsory*
Teaching methods	• *Lecture* • *Practice* • *Independent assignment*
Workload (incl. contact hours, self-study hours)	• *2 SKS x 1.7 = 3.4 ECTS = 91.8 hours* • *Lecture = 23.3 hours* • *Excercise = 28 hours* • *Sel study = 28 hours* • *Exam = 4 hours (MID term and final)* • *Exam preparation = 8.5 hours*
Credit points	*2 SKS = 3.4 ECTS*
Required and recommended prerequisites for joining the module	*Physics*
Module objectives/intended learning outcomes	*ILO 3 : apply knowledge of mathematics, sciences, and engineering principles in agricultural fields;* *ILO 4 : use quantitative analysis, information technology and critical thinking in agricultural engineering profession;* *ILO 5 : use techniques, skills, and modern tools necessary for agricultural engineering practices;* *ILO 6 : anage and utilize agricultural resources effectively, efficiently, and sustainably*
Content	*The student will be able to demonstrate the understanding of processes and phenomena in fluid statics and dynamics in both flows in pipe and open channel. This course covers concept and fluid characteristics, control volume (Bernoulli's Law) and energy balance in fluid, flow in pipe: energy and pressure of water in pipe using Moody, flow in open channel:* *uniform and non-uniform flow, hydraulic jump, gradually and rapid flow.*
Examination forms	*Writing and essay, etc.*
Study and examination requirements	*Attendance Above 80%*
Reading list	*Gerhart, PM. & RJ. Gross, 1985. Fundamentals of Fluid Mechanics, Addison Wesley Pub. Co., California*