HASANUDDIN UNIVERSITY

Agricultural Engineering
Bachelor Program

2023
MODULE DESCRIPTION

BACHELOR PROGRAM
AGRICULTURAL ENGINEERING
FACULTY OF AGRICULTURE
HASANUDDIN UNIVERSITY
2023

Fluid Mechanics Practicum

Semester 3

Module designation	*Fluid Mechanics Practicum*
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	*Lab Works*
Workload (incl. contact hours, self-study hours)	*(Estimated) Total workload:* *1 SKS x 1.7 = 1.7 ECTS = 45.9 hours* • *Lecture = 11.6 hours* • *Excercise = 14 hours* • *Sel study = 14 hours* • *Exam = 2 hours (MID term and final)* • *Exam preparation = 4.3 hours*
Credit points	*1 SKS = 1.7 ECTS*
Required and recommended prerequisites for joining the module	• *Fluid Mechanics*
Module objectives/intended learning outcomes	*ILO 3: Apply knowledge of mathematics, sciences, and engineering principles in agricultural fields; (Knowledge 1)* *ILO 4: Use quantitative analysis, information technology and critical thinking in agricultural engineering profession; (Knowledge 2)* *ILO 6: Design simple equipment, components, or processes needed in agricultural engineering operations; (Skill 2)*
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 oral exam*
Study and examination requirements	*Attendance above 80% and completed report*
Reading list	*Gerhart, PM. & RJ. Gross, 1985. Fundamentals of Fluid Mechanics, Addison Wesley Pub. Co., California*