

2023

MODULE DESCRIPTION

BACHELOR PROGRAM
AGRICULTURAL ENGINEERING
FACULTY OF AGRICULTURE
HASANUDDIN UNIVERSITY
2023



Engineering Hydrology Practicum

Semester 4

Module designation	<i>Engineering Hydrology Practicum</i>
Semester(s) in which the module is taught	<i>IV</i>
Person responsible for the module	<ul style="list-style-type: none"> • <i>Samsuar, STP., M.Si</i> • <i>Husnul Mubarak, S.TP., M.Si</i>
Language	<i>Indonesia</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Practices in Laboratory</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload:</i> <i>1 SKS x 1.7 = 1.7 ECTS = 45.9 hours</i></p> <ul style="list-style-type: none"> • <i>Lecture = 11.6 hours</i> • <i>Excercise = 14 hours</i> • <i>Sel study = 14 hours</i> • <i>Exam = 2 hours (MID term and final)</i> • <i>Exam preparation = 4.3 hours</i>
Credit points	<i>1 SKS =1.7 ECTS</i>
Required and recommended prerequisites for joining the module	<p><i>Basic Physics</i> <i>Fluid Mechanics</i></p>
Module objectives/intended learning outcomes	<p><i>ILO 3 : apply knowledge of mathematics, sciences, and engineering principles in agricultural fields;</i> <i>ILO 4 : use quantitative analysis, information technology and critical thinking in agricultural engineering profession;</i> <i>ILO 6 : manage and utilize agricultural resources effectively, efficiently, and sustainably;</i> <i>ILO 9 : analyze the impact of engineering solutions to the environment and society using a multidisciplinary approach;</i></p>
Content	<p><i>The student will be able to demonstrate the understanding of processes and phenomena in hydrological cycles, and also have capability to analyze data in all component hydrology. This course covers: (1) concept of Hydrological Cycle, (2) Data Processing of precipitation, interception, evaporation, surface and subsurface flow, infiltration and percolation, and groundwater, (3) Statistical hydrology and (4) Rainfall-runoff Modeling.</i></p>
Examination forms	<i>Writing</i>
Study and examination requirements	<i>Attendance above 80%</i>
Reading list	<ul style="list-style-type: none"> • <i>Linsley Jr., RK., MA Kohler, JLH. Paulhus, 1982. Hydrology for Engineers. Third Edition. McGraw-Hill Inc., New York.</i> • <i>Asdak, C., 2004. Hidrologi dan Pengelolaan Daerah Aliran Sungai. Gadjah Mada University Press, Yogyakarta.</i>