



2023 MODULE DESCRIPTION

BACHELOR PROGRAM
AGRICULTURAL ENGINEERING
FACULTY OF AGRICULTURE
HASANUDDIN UNIVERSITY
2023



System Analysis

Elective

Module designation	<i>System Analysis</i>
Semester(s) in which the module is taught	<i>Elective</i>
Person responsible for the module	<ul style="list-style-type: none"> • <i>Prof. Dr. Ir. Junaedi Muhidong, M.Sc</i> • <i>Dr. Ir. Mahmud Achmad, MP</i>
Language	<i>Indonesia</i>
Relation to curriculum	<i>Elective</i>
Teaching methods	<ul style="list-style-type: none"> • <i>Lecture and in-depth discussion</i> • <i>Independent assignment</i>
Workload (incl. contact hours, self-study hours)	<p><i>(Estimated) Total workload:</i> $2 \text{ SKS} \times 1.7 = 3.4 \text{ ECTS} = 91.8 \text{ hours}$</p> <ul style="list-style-type: none"> • <i>Lecture = 23.3 hours</i> • <i>Excercise = 28 hours</i> • <i>Sel study = 28 hours</i> • <i>Exam = 4 hours (MID term and final)</i> • <i>Exam preparation = 8.5 hours</i>
Credit points	<i>2 SKS = 3.4 ECTS</i>
Required and recommended prerequisites for joining the module	<i>Introduction to system analysis</i>
Module objectives/intended learning outcomes	<p><i>ILO 3 : apply knowledge of mathematics, sciences, and engineering principles in agricultural fields;</i></p> <p><i>ILO 9 : analyze the impact of engineering solutions to the environment and society using a multidisciplinary approach;</i></p> <p><i>ILO 10 : explore and develop effective solutions related to agricultural engineering issues.</i></p>
Content	<i>This course introduces students to system analysis in agricultural engineering. Topics covered include systems analysis approaches, system components and characteristics, identification of system components, development of causal loops and feedback of system components, development of flow chart algorithm models of systems.</i>
Examination forms	<i>Writing</i>
Study and examination requirements	<i>Attendance above 80%</i>
Reading list	<ul style="list-style-type: none"> • <i>Athey, T.H.1982. Sistematic Systems Approach, an Integrated for Solving Problems, Prentice-Hall, Inc. Englewood Cliffis, New Jersey</i> • <i>Eriyatno, 2003.Ilmu Sistem. Meningkatkan Mutu dan Efektifitas Manajemen. Edisi Ke tiga. IPB Press. Bogor.</i> • <i>Manetsch, T, J. and G. L, Prk.1977. System analysis and Simulation with Aplications to Economic and Social System Departmen of Electrical Engineering and system sciences, Michigan State University, Michigan.</i>