



**HASANUDDIN  
UNIVERSITY**



**2023**

# MODULE DESCRIPTION

BACHELOR PROGRAM  
AGRICULTURAL ENGINEERING  
FACULTY OF AGRICULTURE  
HASANUDDIN UNIVERSITY  
2023



## Farm Electrification Practicum

### Semester 4

Module designation	<i>Farm Electrification Practicum</i>
Semester(s) in which the module is taught	<i>IV</i>
Person responsible for the module	<i>Muhammad Tahir Sapsal, STP., M.Si Muhammad Rizal, S.TP., M.Si</i>
Language	<i>Indonesia</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Practicum</i>
Workload (incl. contact hours, self-study hours)	<i>(Estimated) Total workload: 1 SKS x 1.7 = 1.7 ECTS = 45.9 hours</i> <ul style="list-style-type: none"> <li>• <i>Lecture = 11.6 hours</i></li> <li>• <i>Excercise = 14 hours</i></li> <li>• <i>Sel study = 14 hours</i></li> <li>• <i>Exam = 2 hours (MID term and final)</i></li> <li>• <i>Exam preparation = 4.3 hours</i></li> </ul>
Credit points	<i>1 SKS = 1.7 ECTS</i>
Required and recommended prerequisites for joining the module	<i>Basic physics Farm Electrification</i>
Module objectives/intended learning outcomes	<i>ILO 3: apply knowledge of mathematics, sciences, and engineering principles in agricultural fields; ILO 5: use techniques, skills, and modern tools necessary for agricultural engineering practices;</i>
Content	<i>This practicum introduces students to electrical codes and rules and discusses low voltage transmission (220 V and 380 V), AC and DC sources, DC circuits, 1- and 3-phase AC, testing procedures, methods of calculating electrical power requirements and power correction factors, electrical installation methods, load distribution (electric heaters, electric motors, lighting). This course includes laboratory practice for 1 and 3 phase AC electrical installations for electric motors, lighting and lamps.</i>
Examination forms	<i>Writing and Oral exam</i>
Study and examination requirements	<i>Completion of all laboratory reports</i>
Reading list	<i>Bovay, H.E 1981. Handbook of Mechanical and Electrical Systems for Buildings. McGraw-Hill Book Company Lister, E.C. 1980. Electric Circuits and Machine. McGraw-Hill Book Company. Mullin, R.C and R.L. Smith, 1992. Electrical Wiring Commercial. Sixth Edition. Delmar Publishing Inc. Seidman, A.H., H. Mahrous, and T.G. Hicks 1983. Handbook of Electric Power Calcularions. McGrawHill Book Company. Turner, W.C. 1982. Energy Management Handbook. Jonh Wiley &amp; Son. New York.</i>