



**HASANUDDIN
UNIVERSITY**

**Agricultural
Engineering**
Bachelor Program

2023 MODULE DESCRIPTION

BACHELOR PROGRAM
AGRICULTURAL ENGINEERING
FACULTY OF AGRICULTURE
HASANUDDIN UNIVERSITY
2023



Fundamental of Soil Science

Semester 3

Module designation	<i>Fundamental of Soil Science</i>
Semester(s) in which the module is taught	<i>I</i>
Person responsible for the module	<i>Prof. Dr. Ir. Hazairin Zubair, M.S. Prof. Dr.Ir. Dorothea Agnes Rampisela, M.Sc. Dr. Ir. Muh. Jayadi, M.P Dr. Ir. Burhanuddin Rasyid, M.Sc Ir. Masyhur Syafiuddin, M.P. Dr. Rismaneswati, S.P., M.P. Dr. Asmita Ahmad, ST. M.Si. Dr. Sartika Laban, SP., MP. Nirmala Juita, SP.,M.Si Ahmad Fauzan Adzima, SP.,M.Sc Risky Nurhikmayani, S.Si.,M.Sc</i>
Language	<i>Indonesia</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Lecture, Lab Works</i>
Workload (incl. contact hours, self-study hours)	<i>(Estimated) Total workload: 3 SKS x 1.7 = 5.1 ECTS = 137.7 hours > Lecture = 35 hours > Excercise = 42 hours > Sel study = 42 hours > Exam = 4 hours (MID term and final) > Exam preparation = 8.5 hours</i>
Credit points	<i>3 SKS : 5.1 ECTS</i>
Required and recommended prerequisites for joining the module	
Module objectives/intended learning outcomes	<i>ILO 3: Apply knowledge of mathematics, sciences, and engineering principles in agricultural fields; (Knowledge 1) ILO 7: Manage and utilize agricultural resources effectively, efficiently, and sustainably; (Competence 1) ILO 9: Analyze the impact of engineering solutions to the environment and society using a multidisciplinary approach; (Competence 3)</i>
Content	<i>This course aims to provide an understanding of the process of soil formation and soil building blocks; the physical, chemical and biological properties of soil for the benefit of plant growth and production, the life of other organisms and for sustainable land use.</i>
Examination forms	<i>Write Exam</i>
Study and examination requirements	<i>Attendance above 80% and Completion of all laboratory practicum</i>

Reading list	<p>Brady, N. C. 1990. The Nature and Properties of Soils. MacMillan Publishing Company. New York.</p> <p>Foth, H.D. 1990. Fundamentals of Soil Science. 8th ed. John Wiley & Sons. New York.</p> <p>Weil, R.R. and Brady, N.C. 2017. The Nature and Properties of Soils. 15th ed. Pearson. Boston.</p> <p>White, R.E. 2006. Principles and Practice of Soil Science. Fourth Edition. Blackwell Publishing. USA.</p>
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