



Subject Module
 Department of Agrotechnology
 Faculty of Agriculture
 University of Islam Malang

Module Handbook

Module Title	Agricultural Ecology
Module Level, if available	Undergraduate Study Program of Agrotechnology
Course Code	MKK4115
Headings, if available	-
Course (MK)	Agricultural Ecology
Semester	III
Course Coordinator	Ir. Siti Muslikah, MP.
Teaching Team	
Language of instruction	Indonesian language/English
Linkages with the Curriculum	Study Program: Agrotechnology Specialization: Agrotechnology Type: Compulsory/elective
Learning Methods and Duration	1. Lecture: 100 minutes/meeting (14 meetings) 2. Practicum 170 minutes/meeting (14 meetings) 3. Structured Assignments/individual and group Assignments presentation
Student Study Load	1. Lecture: 100 minutes/meeting (14 meetings) 2. Practicum: 170 minutes/meeting (14 meetings) 3. Structured Assignments/quiz/group presentation 4. Attendance: 75% of total attendance
Credit Weight	3 credits or 5.1 ECTS
Requirements for Passing the Course	<ul style="list-style-type: none"> • Attendance > 75% • The final score of all the components of the learning evaluation > 44 The final score component: <ul style="list-style-type: none"> • 20% Midterm Exam • 20% Final Exam • 30% Practicum • 20% Structured Assignments (individual and group) • 10% Presence
Prerequisite Courses	-
Learning Outcomes	The expected learning outcomes are: <ol style="list-style-type: none"> 1. Have good and deep knowledge in the field of basic agricultural science that supports Agrotechnology (ILO 3) 2. Able to work independently or in a team, and use various methods of communication. (ILO 4) 3. Able to solve problems that arise in the field of agrotechnology and related fields of science (ILO 5) 4. Able to manage plant production system (ILO 9)
Learning Content	After completing this course students are able to: <ol style="list-style-type: none"> 1. study the principles of ecology 2. examine the basic concepts and theoretical frameworks of agricultural ecology 3. analyze agricultural systems (agroecosystem).

	<ol style="list-style-type: none"> 4. study the relationship between plants and environmental factors both abiotic and biotic 5. manage genetic resources. 6. examine the advantages of complexity and the role of cooperation and mutualism in sustainable agriculture <p>The topics include:</p> <ol style="list-style-type: none"> 1. INTRODUCTION (Scope of Agricultural Ecology) 2. AGROECOSYSTEM CONCEPT 3. PLANT RESPONSE AND ENVIRONMENTAL FACTORS 4. ABIOTIC ENVIRONMENTAL FACTORS (Light, Temperature, humidity) 5. SUSTAINABLE ENERGY IN AGROECOSYSTEMS 6. GENETIC RESOURCES IN AGROECOSYSTEMS 7. BIOTIC ENVIRONMENTAL FACTORS 8. ENVIRONMENTAL COMPLEXITY 9. POPULATION PROCESSES IN AGRICULTURE 10. SPECIES INTERACTION IN THE PLANT COMMUNITY 11. AGROECOSYSTEM DISORDERS, SUCCESS AND MANAGEMENT 12. AGROECOSYSTEM DIVERSITY AND STABILITY 13. INTERACTION BETWEEN AGROECOSYSTEMS AND NATURAL ECOSYSTEMS
Test Terms and Forms	<p>Examination requirements: A minimum of 75 % attendance to attend the final exam</p> <p>Forms of examination:</p> <p>Essay</p>
Learning Media	Projector and screen, Zoom application, LMS of UNISMA (Daring UNISMA), e-book, WA Group
References	<p>Main References :</p> <ol style="list-style-type: none"> 1. Stephen R, Gliessmann. 2000. AGROECOLOGY. Ecological Processes in Sustainable Agriculture <p>Supporting References :</p> <ol style="list-style-type: none"> 1. Reijntjes, C., B. Haverkort, W. Bayer. 1999. Pertanian Masa Depan. Kanisius Yogyakarta. 270 hal. 2. Resosoedarmo, R., K. Kartawinata, A. Soegiarto. 1989. Pengantar Ekologi. Remaja Karya, Bandung. 174 hal 3. Sugito, Y. 1999. Ekologi Tanaman. Lembaga Penerbitan Fakultas Pertanian. Malang. 127 hal 4. Scherr, S.J., J.A. McNeely. 2007. Farming with Nature. Island Press. Washington. 445 hal.