



USK
UNIVERSITAS
SYIAH KUALA

FACULTY OF AGRICULTURE
DEPARTMENT OF SOIL SCIENCE

UNDERGRADUATE PROGRAM

MODULE HANDBOOK

Module designation	Practicum of Agricultural Mechanization (SSOL6007)
Semester(s) in which the module is taught	5 th Semester
Person responsible for the module	Dr. Muhammad Idkham, S.TP., M.Si..
Language	Indonesian, English
Relation to curriculum	Elective module for Soil Science Department
Teaching methods	Practice, lecture, presentation
Workload (incl. contact hours, self-study hours)	✓ 170 minute of practice per week (field/laboratory 50 minutes; structured learning 60 minutes; 60 minutes self-study)
Credit points	1 SKS = 1.6 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ul style="list-style-type: none">✓ Students are able to identify and apply the basic principles of agricultural mechanization independently.✓ Students are able to identify and apply the appropriate types of tools and machinery for agricultural cultivation based on technical requirements and local conditions, and can understand preliminary designs based on agricultural needs analysis.
Content	The Agricultural Mechanization Practicum course studies the specifications of tools and machines used in agricultural cultivation and post-harvest processes.
Exams and assessment formats	Assignment, Practicum Report, Final Practicum Exam
Study and examination requirements	<ul style="list-style-type: none">✓ Case Method: 50%✓ Quiz: 10%✓ Assignment: 20%✓ Final exam: 20%

Reading list	<ol style="list-style-type: none"> 1. Li, H., Kadzamira, M. A., Ogunmodede, A., Finch, E., Zhu, J., Romney, D., & Luke, B. (2023). Lessons learned and challenges of biopesticide usage for locust management—The case of China. <i>Sustainability</i>, 15(7), 6193. 2. Fenibo, E. O., Ijoma, G. N., & Matambo, T. (2022). Biopesticides in sustainable agriculture: Current status and future prospects. <i>New and future development in biopesticide research: Biotechnological exploration</i>, 1-53. 3. Ndolo, D., Njuguna, E., Adetunji, C. O., Harbor, C., Rowe, A., Den Breeyen, A., ... & Hospet, R. (2019). Research and development of biopesticides: Challenges and prospects. <i>Outlooks on Pest Management</i>, 30(6), 267-276. 4. Soyel, S. A., Ruidas, S., Roy, P., Mondal, S., Bhattacharyya, S., & Hazra, D. K. (2023). Biopesticides as eco-friendly substitutes to synthetic pesticides: An insight of present status and future prospects with improved bio-effectiveness, self-lives, and climate resilience. <i>International Journal</i>, 2(2). 5. Oguh, C. E., Okpaka, C. O., Ubani, C. S., Okekeaji, U., Joseph, P. S., & Amadi, E. U. (2019). Natural pesticides (biopesticides) and uses in pest management-a critical review. <i>Asian Journal of Biotechnology and Genetic Engineering</i>, 2(3), 1-18. 6. Dadang, Pr ijono D. 2008. <i>Insektisida Nabati Pr insip Pemanfaatan dan Pengembangan</i>. Bogor (ID): Departemen Proteksi Tanaman, IPB. 7. Hagler JR. 2000. <i>Biological control of Insect Using cultural practices to Enhance Insect Pest Control by Natural Enemies</i>. Di dalam: Rechcigl JE, dan Rechcigl NA, editor. <i>Management: Techniques for Enviromental Protection</i>. Michigan (US): CRC Lewis Publisher
--------------	---