UNDERGRADUATE PROGRAM **MODULE HANDBOOK**

Module designation	Introduction to Sustainable Agriculture (FPEN1001)
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	Faculty Team
Language	Indonesian, English
Relation to curriculum	Faculty compulsory module
Teaching methods	Lecture, lesson, and focus group discussion
Workload (incl. contact hours, self-study hours)	✓ 100 minutes lecture and discussion per week ✓ 120 minutes structured tasks per week ✓ 120 minutes learn to be independent per week
Credit points	2 SKS = 3.2 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	✓ Students are able to explain the definition and understand the aspects and scope of agricultural science, the problems and challenges in the agricultural sector, and policies for sustainable agricultural development. ✓ Students are able to identify innovative technologies that support sustainable agriculture. ✓ Students are able to understand the impacts and environmental changes resulting from agricultural practices.
Content	It discusses the definition and history of agricultural development, agricultural systems which include production, post-harvest, distribution and consumption sub-systems, agricultural and environmental systems, the role of the agricultural sector in national development — which includes activities to increase gross domestic product and increase foreign exchange — the role of the agricultural sector in maintaining sufficient food production, the role of the agricultural sector in providing raw materials for the agricultural industry, agricultural industrialization, and the development of agricultural processing industries, problems in the agricultural sector, as well as the role of education, development and application of science and technology in agricultural development. In addition, the course examines modern socio-environmental issues that are increasingly shaping agricultural policy and practice, such as climate change adaptation and mitigation, sustainable resource management,

	biodiversity conservation, reduction of greenhouse gas emissions, and the promotion of a circular bioeconomy. It also addresses the social dimensions of sustainability, including gender equity, fair labor practices, the empowerment of smallholder farmers, ethical and transparent supply chains, and the integration of traditional ecological knowledge with modern innovations to create resilient, inclusive, and environmentally responsible agricultural systems.
Exams and assessment formats	Multiple choice, essay, and oral presentation.
Study and examination requirements	✓ Participatory activities: 20 % ✓ Project results: 30% ✓ Midtest examination: 25 % ✓ Final examination: 25 %
Reading list	1. Akbar, A., Darma, R., Irawan, A., Fudjaja, L., Amandaria, R., & Akzar, R. (2025). An institutional framework for enhanced food security amidst the COVID-19 pandemic: Strategic implementation and outcomes. Journal of Agricultural and Food Research, 21, 101833. https://doi.org/10.1016/j.jafr.2025.101833 2. Coffey, S. (2019). Special issue: ACIAR at work: Interdisciplinary research into smallholder farming systems. *Agricultural Science, 30*(2) & *31*(1). Ag Institute Australia. 3. Indrawanis, E., & Heriansyah, P. (2023). *Introduction to sustainable agriculture*. Penerbit Lindan Bestari. 4. Ministry of Agriculture, Republic of Indonesia. (2020). *Ministry of Agriculture strategic plan 2020–2024*. 5. Wahyu, A. S., Budiyoko, E. S., & Yoseph, Y. D. R. (2024). *Pembangunan pertanian berkelanjutan*. CV Hei Publishing. 6. Raman, S. (2024). *Agricultural sustainability: principles, processes, and prospects*. CRC Press. 7. Edwards, C. A. (2020). *Sustainable agricultural systems*. CRC Press. 8. Quarshie, B., & Poku, K. M. (2025). Dynamic resonance: unpacking Ghanaian traditional knowledge through proverbs for modern socio-environmental innovation. *Frontiers in Human Dynamics*, *7*, 1456870.