



## COURSE SPECIFICATION 2<sup>nd</sup> SEMESTER

**Course Name** : Agroecology  
**Code** : KU 126  
**Credit** : (2-1)

### Course Description:

Agroecosystem consists of various components, including humans, animals, crops and non-living organisms. To fulfill their various needs, humans make use of agricultural land by utilizing technology. The demands of various cause humans need to exploit agriculture above their capabilities so that the agricultural system is damaged. This happens because of the lack of understanding and internalization of the concept of sustainable agriculture. This subject aims to get an effective and efficient student-based learning program filled with soft skills with appropriate learning methods and media to achieve the basic competencies of the subjects, namely understanding the principles of nature and biodiversity and being able to manage the balance of nature in the agricultural system towards sustainable agriculture. In particular, this course will provide insight and experience about agricultural ecosystems, sustainable agriculture, diversity and social aspects of sustainable agriculture (cognitive), provide skills for students in identifying and analyzing agroecological problems and applying various forms of sustainable agricultural technology (psychomotor), and providing motivation and examples for students to manage agriculture according to the principles of experience towards a sustainable agricultural system (affective).

### References:

- Wezel, A., Bellon, S., Doré, T., Francis, C., Vallod, D., David, C. (2009). Agroecology as a science, a movement or a practice. A review. *Agronomy for Sustainable Development* (published online)
- Wibblemann et al. (2013) Mainstreaming Agroecology: Implications for Global Food and Farming Systems. "Archived copy" (PDF). Archived from the original (PDF) on 2016-05-22. Retrieved 2015-05-19.
- Pretty, Jules. 2008. Agricultural sustainability: concepts, principles and evidence. *Philosophical Transactions of the Royal Society*, 363, 447-465.
- Francis; et al. (2003). "Agroecology: the ecology of food systems". *Journal of Sustainable Agriculture*. 22 (3): 99–118. doi:10.1300/J064v22n03\_10.
- Conway, Gordon R. 1985. Agroecosystem analysis. *Agricultural Administration*, 20, 31-55. Conway, Gordon R. 1985. Agroecosystem analysis. *Agricultural Administration*, 20, 31-55.
- Dalgaard, Tommy, and Nicholas Hutchings, John Porter. "Agroecology, Scaling and Interdisciplinarity." *Agriculture Ecosystems and Environment* 100(2003): 39-51.
- Wojtkowski, Paul A. (2002) *Agroecological Perspectives in Agronomy, Forestry and Agroforestry*. Science Publishers Inc., Enfield, NH, 356p.

IFOAM (International Federation for Organic Agriculture Movements)

**Topics:**

1. Agroecology and agricultural system dynamics
2. Diversity of agricultural systems
3. Agricultural systems and problems
4. Sustainable agriculture systems
5. Organic farming system