Module designation	*Herbicide Technology And Environment*
Semester(s) in which the module is taught	*7th*
Person responsible for the module	*Prof. Dr. Ir. Nanik Sriyani, M.Sc.*
Language	*Indonesian language*
Relation to curriculum	*Elective*
Teaching methods	*Lectures (100 minutes)* *Practicum sessions (170 minutes)*
Workload (incl. contact hours, self-study hours)	*Contact hours : 14 weeks x 100 minutes* *Structured learning: 14 weeks x 120 minutes* *Independent study: 14 weeks x 120 minutes* *Practicum sessions: 14 weeks x 170 minutes*
Credit points	*3 (2-1) CP or 4.76 (ECTS)* *((14 weeks x 100 minutes) + (14 weeks x 120 minutes) +* *(14 weeks x 120 minutes) + (14 weeks x 170 minutes)) :* *60 minutes/hour* *= 119 hours : 25 study hours/ECTS* *= 4.76 (ECTS)*
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	- *Students are able to comprehen the main princip and concept of plant production systems based on the principles of sustainable agriculture.* - *Students are able to assess and develop knowledge of science and technology by paying attention to the humanities and scientific ethics, able to work in a collective collegial team, and be a motivator in society*
Content	*Herbicide technology and environment is a 3 (2-1) credit course.This course contains studies on: The role of herbicides in modern agriculture; weed control concept with herbicide; herbicides in an abiotic environment (herbicide physico-chemical interactions .) with the environment, fate of herbicides applied to the field); herbicides in the biotic environment (herbicidesoil-plant relationship; absorption, translocation, and metabolism of herbicides; in plants; pattern dan the mechanism of action of herbicides; selectivity and plant resistance); classherbicide hazards.*
Examination forms	*oral presentation, essay*

Study and examination requirements	*Participants are evaluated based on their performance in class (lectures) (70%) and lab (practicum) (30%).* *Performance in theory (100%):* *Mid Exam (20%)* *Final Exam (20%)* *Assignments (40%)* *Class participation (10%)* *Individual quiz (10%)* *Performance in practicum (100%):* *Practicum exam (30%)* *Pre-test or post-test (10%)* *Experiment reports (60%)*
Reading list	1. *Textbooks, national and international scientific research journals, technical bulletins on herbicides, information via the internet, the latest information on research results carried out directly by teaching lecturers and their colleagues, and mass media (newspapers, magazines, TV, radio) regarding new discourses that growing in the community about herbicides.* 2. *Moenandir, J. 1990. Fisiologi Herbisida. Rajawali Pers. Jakarta 143Hlm.* 3. *Erliza Hambali, Ani Suryani, Mira Rivai, Pudji Permadi. 2012. Teknologi surfaktan dan aplikasinya (edisi revisi). IPB Press. 282 p.* 4. *Kortekamp A. 2011. Herbicides and Environment. IntechOpen. 762 p* 5. *Andrew Price, Jessica Kelton. 2013. Herbicides (Current Research and Case Studies in Use). intechOpen. 664 p.*