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| **Obligatory module or**  **Selective module** | **Plant Pathogen (Patogen Tumbuhan)** | | **PNH 3150** |
| **Semester** | **V** | | |
| **Module level** | **Bachelor** | | |
| **Module Coordinator** | **Dr. Suryanti, SP, MP** | | |
| **Lecturer(s)** | Dr. Suryanti, SP, MP  Dr. Ir. Sedyo Hartono, MP | | |
| **Module level** | **Undergraduate** | | |
| **Type of Module** | **1 hour and 40 minutes lecture**  **Practical** | | |
| **Status** | **C (compulsory courses)** | | |
| **Exam** | 1. **Written** 2. **Presentation and discussion** | | |
| **Number of participants** |  | | |
| **Credit Points:** | **2/1** | | |
| **Learning outcomes:**   1. Students can understand about the type and characteristic plant pathogen 2. Student understand about the infection process and mechanisms on pathogenesis. 3. Student able to diagnose the disease plant | | | |
| **Topics covered:**  The importance of plant diseases. Conceptual development of diseases. Examples of plant pathogens. Interaction between plant and pathogen at cellular level, plant tissue, and plant population. The impact of external factor on the development of diseases. Diagnosis and management of plant diseases. Examples of economically important plant diseases. | | | |
| **Which previous course required?**   1. **Principles of Crop Protection,** 2. **Principles of Plant Pathology** | | | |
| **Literature:**   * + 1. Agrios, G.N. 2005. Plant Pathology. Academic Press. New York. 948pp.     2. Semangun, H. 2000. Introduction to Plant Diseases. Gadjah Mada University Press. (In Indonesian)     3. Indonesian Journal of Plant Protection | | | |
| **Material provided:**   1. To introduce the economic importance of plant diseases 2. To introduce the history of Plant Pathology 3. To introduce the theory and concept of plant disease 4. Describe the plant pathogens 5. Describe the pathogenesis of plant disease 6. Describe the environmental factors affecting plant disease 7. Explain and describe of plant disease epidemiology 8. Explain the principles of plant disease management 9. Describe the examples of plant disease in Indonesia 10. Group/class discussion about plant diseases | | | |
| **Requirements for exam:**   1. Minimum attendance 70% 2. Doing assignment | | | |
| **Teaching format/ class hour per week during the semester** | |  | |
| Workload (hrs).   1. Theoretical of course: 13 times 2. Lab work: : pre-test, laboratory work, reports 3. Home studies: make a paper about selected topics about the kind of plant pathogen and discussed in group on the class | | | |