



## Module Description/Course Syllabi

Study Program : Bachelor Program (S1)  
 Faculty of Agriculture  
 University of Andalas

### 1. Course number and name

PIT62202 Soil Biotechnology

### 2. Credits and contact hours/Number of ECTS credits allocated

3 credits

### 3. Instructors and course coordinator

1. Prof.Dr.Ir., Hermansah MS. MSc,
2. Prof.Dr.Ir., Aprisal, MP,
3. Dr.Ir. Agustian
4. Dr. Mimien Harianti, SP. MP
5. Dr., Mimien Harianti, SP. MP,
6. Ir. Lusi Maira, MAgrSc
7. Nofrita Sandi, SP. MP

### 4. Text book, title, outhor, and year

1. Metting, F.B. Jr. 1993. Soil Microbial Ecology, Applications in Agricultural and Environmental Management
2. Paul, E.A and F.E Clark. 1996. Soil Microbiology and Biochemistry
3. Sylvia, D.M. et.al. 1998. Principles and Applications of Soil Microbiology
4. Sadasivam Kannaiyan · 2010. Soil Microbiology and Soil Biotechnology
5. Abdiel Edwards · 2012. Experiment in Soil Biotechnology

### 5. Specific course information

#### . *Brief description of the content of the course (catalog description)*

After completing this course, students are expected to be able to explain the role of microorganisms in the biotransformation process in the soil, know about the genetic potential of soil microorganisms and understand microorganism manipulation techniques for various purposes of use for both agricultural and non-agricultural purposes

#### *B. Level of course unit (according to EQF: first cycle Bachelor, second cycle Master)*

First Cycle Bachelor

#### *C. Semester when the course unit is delivered*

Even Semester

<b><i>D. Mode of delivery (face-to-face, distance learning)</i></b>
Face to face
<b><i>6. Intended Learning Outcomes (CPL)</i></b>
ILO-4: Able to apply their professional responsibilities to make decisions in land and environmental management P4.2 Interpreting soil properties and characteristics
<b><i>7. Course Learning Outcomes (CPMK) ex. The student will be able to explain the significance of current research about a particular topic.</i></b>
1. Interpret soil properties and characteristics assess soil properties and characteristics
<b><i>8. Learning and teaching methods</i></b>
Cooperative Learning and Project Based Learning
<b><i>9. Language of instruction</i></b>
Indonesian
<b><i>10. Assessment methods and criteria</i></b>
<b>Summative Assessment :</b> Assignment UTS UAS Internship
<b>Formative Assessment:</b> Minutes paper