

**DETERMINATION OF CREDITS COURSES  
AGROCLIMATOLOGY**

| Course                 | CLO  | CLO 1.1  | Learning Methods   | Study Materials   | Study Hours |   | Sks/Credits |
|------------------------|--|--|--|---|-------------|---|-------------|
|                        |  |  |  |   | T           | P |             |
| Plant<br>Biotechnology | Students are able to explain the basic concepts of climate theory and show their relationship to the agricultural sector and show examples of its application in the agricultural sector.  | Understand the basic concepts of climate theory<br>Presents the results of discussions on the relationship between climate and agriculture<br>Demonstrates climate recording technology at climatology stations  | Face to Face, Structure<br>Assignment, Independent Study | Explanation of basic concepts of climate theory<br>Climatic factors<br>Relationship between climatic factors and agriculture<br>Introduction to climatological stations<br>Introduction to climate recording technology                                   | 7           | 0 | 0,15        |
|                        | Students are able to explain the elements of climate (atmosphere, solar radiation, air temperature, evaporation, wind, clouds, rain and air pressure) and relate the relationship between climate elements and agriculture and practice observing climate elements | Explain the theory about the atmosphere and its role in life<br>Presents the results of discussions regarding the role of atmosphere in the agricultural sector<br>Respond to the lecturer's explanation   | Face to Face, Structure<br>Assignment, Independent Study | Definition of Atmosphere<br>Particles and composition in the atmosphere<br>Atmospheric structure<br>Atmospheric Functions<br>Pollution in the atmosphere<br>The role of the atmosphere in life and agriculture  | 7           | 0 | 0,15        |
|                        |  | Explain the elements of solar radiation<br>Presents the results of discussions regarding the relationship between solar radiation and its role in agriculture<br>Practicing solar radiation measurements<br>Processing solar radiation data                      | Face to Face, Structure<br>Assignment, Independent Study | Definition and elements of solar radiation<br>The process of solar radiation reaching the earth<br>Factors influencing the receipt of solar radiation<br>Benefits and impacts of solar radiation<br>Introduction to solar radiation measurement equipment | 7           | 0 | 0,15        |
|                        |  | Explain the basic concept of air temperature and its role in life<br>Presents the results of discussions regarding the relationship between air temperature and its role in agriculture<br>Practice measuring air temperature<br>Processing air temperature data | Face to Face, Structure<br>Assignment, Independent Study | Definition of air temperature and types of temperature<br>Factors influencing air temperature<br>The benefits and impacts of temperature on the earth and living things<br>Efforts to maintain  | 7           | 0 | 0,15        |

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|  |   |   | temperature stability<br>Introduction to air temperature measurement equipment   |   |   |      |
|  | Explain the basic concept of evaporation and its role in life<br>Presents the results of discussions regarding the relationship between evaporation and its role in agriculture<br>Practice measuring and calculating evaporation values        | Face to Face, Structure Assignment, Independent Study | Air pressure definition<br>Factors affecting air pressure<br>The relationship between air pressure and other climate elements<br>Use of air pressure measurement equipment   | 7 | 0 | 0,15 |
|  | Explain the basic concept of air pressure and its role in life<br>Presents the results of a discussion regarding the relationship between air pressure and its role in agriculture<br>Respond to the results of the group presentation          | Face to Face, Structure Assignment, Independent Study | Definition of Wind and types of wind<br>Factors that influence wind speed and direction<br>Impact and benefits of wind<br>Efforts to overcome excessively high wind speeds<br>Equipment for measuring wind speed and direction | 7 | 0 | 0,15 |
|  | Explain the basic concept of wind and its role in life<br>Presents the results of discussions regarding the relationship between wind and its role in agriculture<br>Practice measuring wind speed and direction,<br>Processing wind speed data | Face to Face, Structure Assignment, Independent Study | Definition of clouds and how to observe them<br>Factors that influence the speed of cloud formation<br>The relationship between clouds and other climate elements  | 7 | 7 | 0,40 |
|  | Distinguish between types of clouds<br>Presents the results of discussions regarding the relationship between clouds and their role in agriculture<br>Respond to the results of group discussions   | Face to Face, Structure Assignment, Independent Study | Definition of rain and types of rain<br>The process of rain<br>The impact of rain on plants, soil and planting patterns<br>Benefits of rain in the fields of agriculture, irrigation and fisheries                             | 7 | 7 | 0,40 |

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|   |   |  | Rainfall measurement equipment  |   |   |      |
|   | Interpreting rain and its types<br>Presents the results of discussions regarding the relationship between rain and its role in agriculture<br>Practice measuring rainfall<br>Processing rainfall data | Face to Face, Structure<br>Assignment, Independent Study | Definition of general climate types/classifications<br>Types and basic principles of climate classification in general (solar climate and physical climate)<br>The influence of climate classification on agriculture | 7 | 0 | 0,15 |
| Students are able to determine the climate classification of an area and relate it to plant growth conditions and design planting patterns based on the climate classification and plant growth conditions. | Understand the basic concepts of climate type/classification and their division<br>Understanding the influence of climate classification in agriculture   | Face to Face, Structure<br>Assignment, Independent Study | Various climate classifications in agriculture<br>Basic climate classification<br>How to classify the climate of a region<br>List the climate elements of an area<br>Calculate and classify the climate of an area    | 7 | 7 | 0,40 |
|   | Understand the various climate classifications<br>Determine how to classify climate<br>Demonstrates the application of climate classification in agriculture  | Face to Face, Structure<br>Assignment, Independent Study | The results of the climate classification of an area are linked to the conditions for plant growth<br>Designing planting patterns in an area based on its climate classification.                                     | 7 | 7 | 0,40 |
|   | Conclude the climate classification of an area<br>Relate climate classification to plant growing conditions<br>Designing appropriate planting patterns in an area based on its climate classification | Face to Face, Structure<br>Assignment, Independent Study | Definition of Global Warming<br>Factors influencing Global warming<br>The impact of global warming on agriculture<br>Climate problems in Indonesia  | 7 | 0 | 0,15 |

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| Students are able to conclude about the phenomenon of climate change and formulate the causes of its occurrence and show its impact in the agricultural sector. | Understand the basic concepts of global warming<br>Connecting climate elements to the causes of global warming<br>Shows the impact of global warming in agriculture   | Face to Face, Structure<br>Assignment, Independent Study | Understanding climate change and shifts<br>Examples of climate change and shift phenomena<br>The impact of climate shifts on agriculture<br>Climate change mitigation and adaptation | 7  | 0  | 0,15 |
|   | Concluding about the phenomenon of climate change<br>Formulate the causes of climate change<br>Shows the impact of climate change in agriculture<br>Formulate climate change mitigation and adaptation strategies | Face to Face, Structure<br>Assignment, Independent Study | Understanding climate change and shifts<br>Examples of climate change and shift phenomena<br>The impact of climate shifts on agriculture<br>Climate change mitigation and adaptation | 7  | 0  | 0,15 |
|   |   |  | <b>Total Hours</b>   | 98 | 28 | 3,00 |
| sks/credit Theory   |   | (Total Hours for Theory × 1 sks)/(2.83 × 16)             | <b>SKS Theory</b>  |    |    | 2,16 |
| sks/credit Practicum/field work   |   | (Total Hours for Practicum × 1 sks)/(2.83 × 10)          | <b>SKS Practicum</b>   |    |    | 0,99 |

Notes: T = Theory P = Practicum/Field Work  
1 SKS/Credit = 170 minutes = 2,83 hours  
1 Semester = 16 Face Times

The study time required for students to achieve CLO at each learning stage is determined by the lecturer/lecturer team based on their experience in teaching the course.

Total Course SKS/Credits = Theory + Practicum/field work